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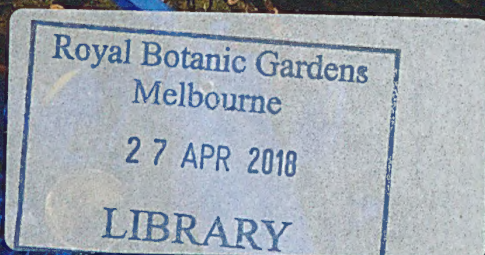
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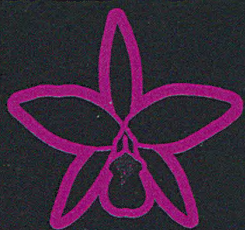


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From the Editor's Desk

In this issue we feature a new *Sarcophilus* species from North Queensland that becomes the fifth member of the *Sarcophilus ceciliae* complex. The other species being *Sarcophilus roseus*, *Sarcophilus eriochilus* and *Sarcophilus rarus* from New Caledonia. The full description is published here, accompanied by numerous photographs and a line drawing. Ironically plants were collected in the 1960s, but never survived to flower in cultivation, and were assumed to be *Sarcophilus roseus* purely on growth habit. This is the second new *Sarcophilus* species to be described in the *AOR* over the past six months (*Sarcophilus loganii*).

Gary Yong Gee is widely regarded in Australia as one of the finest students of species orchids in Australia. Gary is also a superb floral photographer. He has spent a lifetime researching and studying orchid species with a thoughtful and enquiring mind, having travelled around the world to see orchids in the wild and at major international orchid shows, conferences and events. In this issue Gary gives us a photographic tour of some of the standout orchid species on display at the recent World Orchid Conference in Ecuador.

Phalaenopsis seem to have become "the orchid" most gardeners now relate to. They are being mass produced in specialised computer-controlled massive greenhouses (the size of football fields and larger!). Superb quality moth orchids in a wide range of colours, sizes and styles are now readily available in most larger retailers in Australia for between \$7.50 and \$25.00 for plants in full bloom. Many would have been considered award quality here less than a decade ago. The superiority now available essentially voids any quality awards given to *Phalaenopsis* in Australia. Any further accolades would be considered rewards rather than awards.

The orchids exhibited at the Tokyo Dome Show in Japan and the Taiwan International Orchid Show showcase the cutting edge hybrids and elite species in the most popular genera. They have their fingers very much on the pulse on the direction and trends in orchid growing and what the gardening public wants. It's no surprise that hybrid *Cymbidiums* have lost much appeal, and are poorly represented in these shows. It's worth noting that the main *Cymbidium* journals have now folded, including the local amateurish effort that was always going to be ephemeral. The specialist *Cymbidium* clubs have suffered because of this. Sadly, and many won't like reading this, it seems *Cymbidiums* are on the decline on a global scale. Their progress appears to have stalled.

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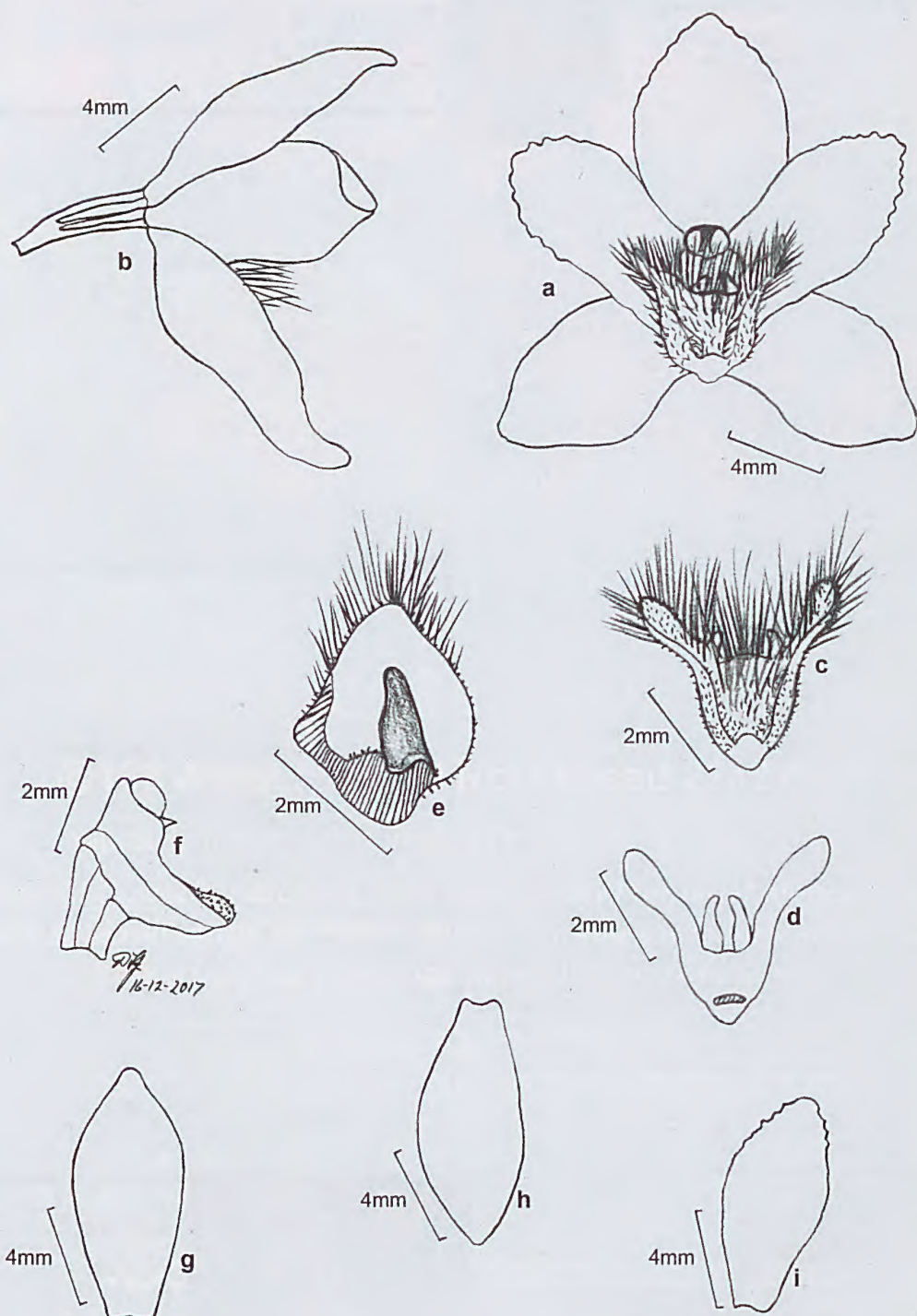
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Cover Shot

***Phalaenopsis Unimax*
Blush '#1' SM/22WOC**

was Champion Orchid Hybrid at the 22nd World Orchid Conference Show.
(Plant: Taiwan Orchid Growers Association,
Photo: Gary Yong Gee)



***Sarcophilus setosus*, near Ravenshoe, Queensland, D.P.Banks (MAC12773) (Fig. 1.)**
a. flower from front; b. flower from side; c. labellum from front; d. labellum from rear; e. longitudinal section of labellum;
f. column from side; g. dorsal sepal; h. lateral sepal; i. petal.
© D.L.Jones, 16 December 2017.

Sarcochilus setosus

a New Species from the North Kennedy District of north-eastern Queensland

by David L. Jones¹, Mark A. Clements² and David P. Banks³

Abstract

Sarcochilus setosus D.L.Jones, M.A.Clem. & D.P.Banks, from the North Kennedy District of north-eastern Queensland, is described and illustrated. The new species is compared to three other closely allied species, *Sarcochilus ceciliae* F.Muell. and *Sarcochilus roseus* (Clemesha) Clemesha, both from north-eastern Queensland, and *Sarcochilus eriochilus* Fitzg. from south-eastern Queensland and north-eastern New South Wales.

Key Words

Orchidaceae, *Sarcochilus setosus*, *Sarcochilus ceciliae*, *Sarcochilus roseus*, *Sarcochilus eriochilus*, new species, Queensland, New South Wales, Australian flora.

Introduction

Sarcochilus loganii, a new species of epiphytic orchid was described recently from the Wide Bay District in south-eastern Queensland and its relationships with the allied taxa *Sarcochilus hillii* (F.Muell.) F.Muell. and *Sarcochilus tricallatus* (Rupp) Rupp were discussed in detail (Jones & Clements 2017). In this paper another species of *Sarcochilus* which has been cultivated for several years is described as new.

Discovery

This new species was discovered by David Banks and Michael Harrison on 19th September 2009. Together, they had been looking for *Sarcochilus roseus*, in one of the locations mentioned by Steve Clemesha in his 1969 description and discussion of this species. As the plants were not in flower at the time, Banks and Harrison assumed they had indeed found *Sarcochilus roseus*, particularly in light of the stiffly erect plant habit and unspotted leaves. The following day they took local naturalist James Walker to the site and more plants were located. All noted the unusual number of aerial plantlets on the previous season's spent inflorescences, a feature not mentioned in Clemesha's descriptions of *Sarcochilus roseus* in 1967 (as *Sarcochilus ceciliae* subsp. *roseus*) and 1969 (as *Sarcochilus roseus*), and also not recorded by Alick Dockrill as a feature of *Sarcochilus roseus* in his opus *Australian Indigenous Orchids*.

When this species was first observed in bloom, it was clear that this was not *Sarcochilus roseus*, but a closely related and distinct new species. Upon blooming, David Banks contacted Steve Clemesha and sent him images of the flowers.

He agreed that it was a distinctive *Sarcochilus* that he had not seen before. Apparently Clemesha had collected plants from this location in the late 1960s, but they died in cultivation without blooming, and he assumed they were *Sarcochilus roseus*, purely on the growth habit and unspotted leaves. It took over 50 years before the real status of this *Sarcochilus* was unravelled.

The new species is described below as *Sarcochilus setosus*, illustrated with a line drawing and photos and compared in detail with *Sarcochilus ceciliae*, *Sarcochilus roseus* and *Sarcochilus eriochilus*.

Taxonomy

Sarcochilus setosus D.L.Jones, M.A.Clem. & D.P.Banks *sp. nov.* With affinity to *Sarcochilus ceciliae* F.Muell. but differing by its white labellum with outcurved lateral lobes (incurved in *S. ceciliae*), the ventral surface of the labellum, lateral lobes and midlobe covered with long, white acicular, non-glandular trichomes (short glandular trichomes in *S. ceciliae*), each lateral lobe flanked at the base by an elongated glabrous callus structure (short single central callus in *S. ceciliae*), and an inverse cuneate midlobe (oblong/obovate in *S. ceciliae*); also with *S. roseus* (Clemesha) Clemesha but differing by the long acicular hairs on most parts of the labellum (*S. roseus* has short glandular hairs on the ventral labellum surface and midlobe, and glabrous lateral lobes), and the midlobe free from the lateral lobes (both parts fused in *S. roseus*); also with *S. eriochilus* Fitzg., but differing by the long acicular hairs on most parts of the labellum (*S. eriochilus* has short glandular and eglandular hairs on most parts of the labellum, outcurved lateral lobes (incurved in *S. eriochilus*) and two elongate calli each flanking the inner base of a lateral lobe (two elongate calli and a short, lobed central callus in *S. eriochilus*).

Type: QUEENSLAND. North Kennedy District; Cultivated from plants collected near Ravenshoe [precise locality withheld for conservation purposes], 4 Aug. 2017, D.P.Banks (MAC12773), (holo CANB).

Description: Lithophytic orchid forming small dense clumps with erect to spreading leaves. *Stems* erect, 30–80 mm long, branching from the base. *Leaves* 4–8, linear, canalliculate, 40–70 mm long, 4–7 mm wide, erect to arching, coriaceous, dark green, apex acuminate. *Racemes* filiform, erect to arching, 80–150 mm long, 2–c.20-flowered; flowers opening sequentially, each lasting 5–7 days. *Pedicels* filiform, c. 3–4 mm long, merging with the ovary. *Ovaries*

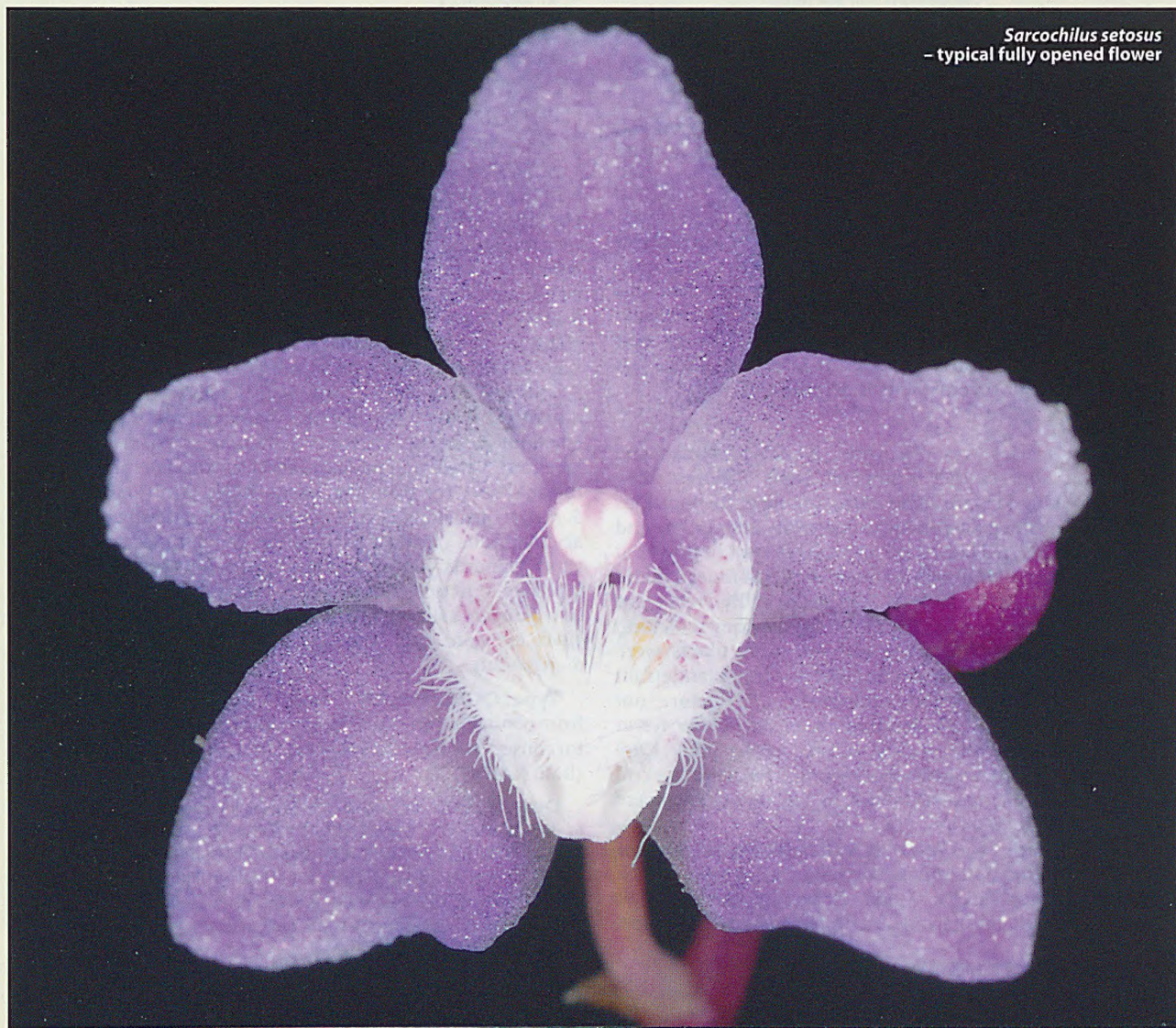
narrowly oblong-obovoid, 3-4 mm long. *Flowers* upward facing, cupped, 10-16 mm long, 10-16 mm across, bright pink, labellum white, densely covered with long acicular trichomes. *Sepals* and petals shallowly incurved, broadest near the middle or just above, overlapping at the base. *Dorsal sepal* obliquely erect, obovate, 8-9 mm long, c. 4 mm wide, distal margins slightly irregular, apex obtuse. *Lateral sepals* widely divergent, asymmetrically oblong-obovate, 8-9 mm long, c. 4 mm across, apex obtuse. *Petals* incurved to spreading, obovate, 7-8 mm long, c. 4 mm across, distal margins irregularly shortly crenate/dentate, apex broadly obtuse. *Labellum* c. 3 mm long, c. 4 mm across, c. 2.3 mm deep; lateral lobes erect and outcurved, more or less triangular in profile, c. 2.3 mm long, c. 2 mm wide, densely hairy, the basal parts covered with short (c. 0.1 mm long) hairs, distal surfaces covered with long transparent acicular non-glandular hairs to 1.5 mm long; spur (chin) very short, broad, blunt, with a shallow sunken area on the inner side of the callus; midlobe free from the lateral lobes, inverse-cuneate, c. 0.6 mm long, covered with long hispid non-glandular trichomes. *Calli* two, each flanking the inner base of a lateral lobe, elongate, glabrous, about twice as long as wide, apex obtuse. *Column* c. 1.5 mm long, pink; column foot c. 2 mm long, arising more or less at right angles to the body of the column, distal surface papillate. *Anther* more or less ovate, c. 0.8 mm long, c. 1 mm across, white with a pink dorsal blotch, rostrum short, porrect to upcurved. *Pollinarium* c. 1.2 mm long; pollinia ovate, c. 0.7 mm long, orange, waxy; stipe c. 0.3 mm long; retinaculum c. 0.4 mm long. *Stigma* transversely elliptic, c. 0.8 mm across. *Capsules* not seen. **Fig. 1.**

Flowering: December to March.

Distribution and ecology: North-eastern Queensland, where known only from a single locality to the east of Ravenshoe in the North Kennedy District. It grows in sheltered sites among shrubs and under trees on granite boulders. Altitude c. 670 m.

Recognition: Lithophytic orchid forming small to moderately large clumps of short stems with thick-textured channelled leaves to 70 x 7 mm, long filiform racemes bearing sequentially opening cupped bright pink flowers (10-16 mm long, 10-16 mm wide) with obovate lateral sepals and petals, the petals often with shortly crenulate/dentate distal margins, the labellum white, densely covered with long white needle-like trichomes, the lateral lobes outcurved, the midlobe separate from the lateral lobes, erect, inversely cuneate, covered with long needle-like trichomes, and two elongate glabrous calli, flanking the inner base of each lateral lobe.

Similar species: This species has general similarities in growth habit, leaves and floral features to *Sarcochilus ceciliae* F.Muell., *Sarcochilus eriochilus* Fitzg. and *Sarcochilus roseus* (Clomesha) Clomesha and could be readily overlooked without close scrutiny. The new species is readily distinguished from all of these three species by striking features of the labellum, in particular the outcurved lateral lobes (incurved in the other three species) each lateral lobe flanked on the



Sarcochilus setosus
– typical fully opened flower



Sarcochilus setosus
- showing flowering habit

inner basal side by an elongate glabrous callus structure, the lateral lobes and midlobe separate structures, the midlobe inversely cuneate, and most prominently the labellum ventral surface, lateral lobes and midlobe covered with conspicuous, long, acicular, white hairs which impart a grizzled or bearded appearance to the front of the flower. The shortly crenulate/dentate distal margins of the petals are also noteworthy.

Notes: Only a few flowers are open at once, others opening as the raceme extends, producing flowers sporadically over a short period. Each flower lasts 5-7 days. Aerial growths often form at the end of the inflorescence after blooming, but initiating whilst the distal flowers are still fresh.

Conservation: Probably conserved in the Tully Falls National Park.

Etymology: The Latin *setosus*, bristly like a beard, referring to the mass of long thin acicular white hairs which adorn the ventral surface, lateral lobes and midlobe of the labellum.

Acknowledgements: Special thanks to Jean Egan for preparing David Jones' drawing for publication and also Barbara Jones, Michael Harrison and James Walker for reading early drafts of this paper. The included images have been taken by David Banks, Michael Harrison and James Walker.

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Sarcophilus setosus
– note flower size and
developing aerial plantlet



Sarcophilus setosus
– an unusually large
flower form



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Sarcophilus setosus
– plant in situ
at Type location,
they can be quite cryptic



Sarcophilus setosus
– note unspotted leaves
and stilt-like root system

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Sarcochilus setosus
- mature plant in bloom



Sarcochilus setosus
- developing aerial
growths/plantlets off
end of inflorescences



Sarcophilus setosus
– the wavy edged
distal margins of the
petals are a feature





Sarcochilus setosus
– blooms are generally
somewhat triangular in shape



Sarcochilus ceciliae from Townsville, North Queensland on left compared to the consistently smaller and paler *Sarcochilus eriochilus* from the upper Hastings Valley, NSW. Note the labellum shape and form. Both these taxa have spotted leaves



Sarcochilus roseus
– from the northern Atherton
Tableland, North Queensland.
Note the relatively smooth slipper-like
labellum without incisions. It is often inexplicably
confused with the very different *Sarcochilus ceciliae*. True *Sarcochilus roseus* is naturally
restricted in distribution and rare in cultivation, with many examples labelled as such in
collections actually being *Sarcochilus ceciliae*

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AOR 065

Species at the 22nd World Orchid Conference Show

Text and photos by Gary Yong Gee

Guayaquil on the west coast of Ecuador hosted a wonderful 22nd World Orchid Conference show in November 2017. The organisers and vendors must have been happy with the constant crowded attendance during the five day show. Numerous visitors to the show were taking frequent selfies in front of many of the exhibits. Luckily registrants were able to photograph displays before the show opened to the public from 10:00 am till 9:00 pm each day.

There were some marvellous orchid displays from Thailand, Gardens by the Bay in Singapore, Ecuagenera of Ecuador which took 3 days to set up. Each of these exhibits was awarded a well-earned Gold Medal.

All Orchids Society of Thailand's massed colour groupings of hybrid vandas, oncidiums, cattleyas and dendrobiums adorned large tree branches. The branches were fastidiously covered in moss in a naturalistic setting. This was enhanced by a waterfall coming down from one of the openings. There were *Paphiopedilum* hybrids and nearly 150 *Paphiopedilum spicerianum* arranged in groups amongst a well-groomed carpet of moss.

Gardens by the Bay showed off their *Spatulata* dendrobiums, semi-terete vandas and their National Flower *Papilionanthe* Miss Joaquim in a large walk-through cave setting. Cooler-growing genera such as *Miltoniopsis* and *Lycaste* hybrids along with *Cyrtorchilum macranthum* were included amongst the exhibit. White balls of cut *Dendrobium* flowers added extra interest.

Taiwan Orchid Growers Association's mountains of white, pink and yellow phalaenopsis hybrids vied for attention and gained a SM/22WOC. Champion Orchid Hybrid was their *Phalaenopsis* Unimax Blush '#1' GM/22WOC. Branches from lower nodes beneath the rachis had been removed early to produce the single long raceme of 17 flowers.

Sociedad Colombiana de Orquideología showed off their wares amongst vendor stands. *Cattleya* hybrids, baskets of *Miltoniopsis*, cut *Oncidium* sprays and cut *Cymbidium* stems were artistically arranged. These were included amongst baskets of vegetables such as onions, potatoes, pumpkins and cabbages. This exhibit gained a BM/22WOC.

Ecuagenera was rewarded with Grand Champion Exhibit for their massive display, the biggest in the venue. They used 1,000 different flowering species [each numbered] plus an equal number of hybrid orchids. Their display was in the guise of a fort with two entrances. The entrances were lined with white hybrid *Phalaenopsis* on the sides and red *Miltoniopsis* hybrids arched over the top. Mostly the species were arranged inside, grouped according to their taxonomic tribes, and the hybrids were similarly grouped outside. The tiers of orchids in long rows reminded me of historical photographs of some of the English orchid displays of the past.

The inside areas of the staging were landscaped with accompanying foliage plus moss while the outer orchids showed up against black. Tall columns of the typical form of *Cattleya maxima* plus violet-blue or *coerulea* forms provided height to Ecuagenera's *Phragmipedium* feature. Height was also afforded by several 2-3 m tall *Oerstedella pseudoschumanniana* [syn. *Epidendrum pseudoschumannianum*] and *Epidendrum oraion*.

Ecuagenera also had some half a dozen wardian cases inside showing off many of the miniature plants. Their *Dendrobium* wardian case gained another of the Gold Medals. The grouping of over 100 flowering plants of *Phragmipedium warszewiczianum* [syn. *Phragmipedium wallisii*] impressed the judges with a further Gold Medal.

Grand Champion Orchid was the miniature *Dendrobium parvulum* 'Violet Blue' GM/22WOC massed with starry blue flowers with orange lip. Reserve Champion Orchid was *Odontoglossum naevium* [syn. *Oncidium naevium*] GM/22WOC, a choice cultivar with 5 racemes of starry white and red-spotted blooms. Both of these major prize-winners were exhibited by Ecuagenera. Champion Specimen went to a massive plant and choice chunky cultivar of *Maxillaria callichroma* SM/22WOC which was shown by Ecuagenera.

As all orchid growers know, timing plays a major role in exhibitions. Several plants that only held buds during judging opened for the public to see. One of these was a fine example of *Phragmipedium kovachii* on Ecuagenera's stand. I'm sure that it would have been in the running for one of the major prizes if the judging had been held two days later.

The 22nd W.O.C. show was especially rich with species. As I expected, there were numerous species from Ecuador and South America, including many that I have never seen in cultivation in Australia. An added bonus was a range of species from other parts of the world. The accompanying photographs give an idea of the variety exhibited.

Not only was the show well attended but also the four day scientific and lecture program. Two concurrent sessions of lectures over 4 days covered a wide variety of Taxonomic, Conservation and Cultivation topics. Unfortunately for the organisers, several of the advertised speakers were unable to be in Guayaquil to give their paper.

Cassio van den Berg discussed natural hybridisation as a process for the origin of species in lineages in Laeliinae, citing amongst others, *Cattleya walkeriana* and the naturally-occurring hybrid *Cattleya x dolosa*. Frank Cereva provided an insight into the nine *Phragmipedium* species of Ecuador. Melisa Díaz-Morales detailed the results of pollination studies of *Phragmipedium longifolium* and had some amazing videos for us to see. Eliseo Tesón revisited the *Phragmipedium schlimii* complex and Andrea Niessen covered orchid conservation in Colombia.

Günter Gerlach expounded the fragrance composition studies of Euglossine bee-pollinated orchids of particularly Stanhopeinae. The topic of Clare Hermans' presentation was the RHS Orchid Committee and the history of the RHS orchid award paintings and artists. Johan Hermans showed *Dracula* at home in the wild and in captivity. Stig Dalström pointed out that *Odontoglossum* is monophyletic – a move to resurrect the Andean genus from *Oncidium*.

Franco Pupulin showed the audience that the number of Pleurothallidinae species has been increasing rapidly so that it could eventually be up near 10,000. This would make Pleurothallidinae the most species-rich of the Orchidaceae. Adam Karremans introduced listeners to the *Diptera* pollinators [flies] of the 5,100 currently accepted species of the Pleurothallidinae subtribe. One major fallacy that Adam corrected is that *Masdevallia coccinea* is fly-pollinated and is not pollinated by a humming bird. Rafaël Goverts brought the World Checklist of Orchids up to date by reminding us of the 2016 launch of the Plants of the World Online Portal.

I congratulate Ecuador for a memorable 22nd W.O.C. The Conference Proceedings will be published and will be a fine record of the lecture program.

At the close of the Conference, the World Orchid Conference Trust confirmed that Tainan, Taiwan is to be the host for the 23rd W.O.C. in 2020. Congratulations are in order for Perth, Western Australia, which was announced as being the prospective site for the 24th W.O.C. in 2023. This was a case of third time lucky after 9 years of preparations to host this prestigious event.

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▼ A walk-through cave provides the support for *Papilionanthe* Miss Joaquim, *Miltoniopsis*, *Lycaste*, *Dendrobium* in this Gardens by the Bay, Singapore exhibit GM/22WOC.





▲ Massed colour groupings of vandas above, with *Cattleya*, *Dendrobium* and *Paphiopedilum* below make up the All Orchids Society of Thailand exhibit, GM/22WOC.

▼ *Phragmipedium* feature with columns of *Cattleya maxima*, *Oerstedella pseudoschumanniana*, *Phragmipedium warszewiczianum* and *Phragmipedium besseae*. Ecuagenera.





▲ An eye-catching spectacle of over 100 plants of *Phragmipedium warszewiczianum* displayed together on three tiers was awarded a Gold Medal at the 22nd W.O.C. Ecuagenera.

▼ Baskets of produce tastefully arranged with *Miltoniopsis*, *Cattleya*, *Masdevallia* hybrids plus bunches of cut *Oncidium* and *Cymbidium*. This exhibit was given a BM/22WOC. Sociedad Colombiana de Orquideología.





▲ Quality cut *Vanda*, *Oncidium*, *Cymbidium* and *Paphiopedilum* are beautifully arranged for this overseas display by Deutsche Orchideen Gesellschaft. A SM/22WOC was granted.

► Mountains of white, pink and yellow *Phalaenopsis* hybrids. Taiwan Orchid Growers Association exhibit, SM/22WOC.

▼ *Ticoglossum oerstedii* [syn. *Rossioglossum oerstedii*] carries a few flowers on the raceme in the Sociedad Colombiana de Orquideologia exhibit.



► Dark-coloured example of *Ceratobium leporinum* [syn. *Dendrobium leporinum*] shown by Gardens by the Bay, Singapore.

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► *Arachnis hookeriana* is a warm-growing species from Peninsular Malaysia and Borneo. Gardens by the Bay, Singapore.

▼ A fine cultivar of *Polychilos lueddemanniana* [syn. *Phalaenopsis lueddemanniana*] GM/22WOC, from the Philippines was Best *Phalaenopsis* Species. Taiwan Orchid Growers Association.



▼ Colombian species *Odontoglossum naevium* [syn. *Oncidium naevium*] GM/22/WOC was Reserve Champion Orchid. Ecuagenera.

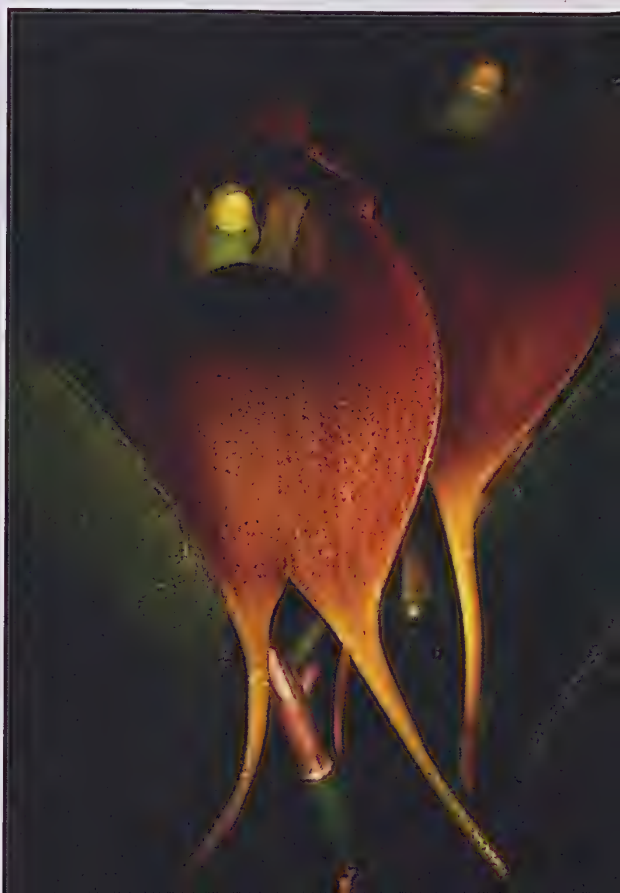


► *Acianthera pectinata* BM/22WOC produces pendent leaves with these comb-like racemes. The raceme is held against the leaf and faces the ground. Ecuagenera.

▼ *Maxillaria hennisiana* hails from Panama, Colombia and Ecuador. It literally puts out a carpet of bicoloured flowers beneath its distinctly stalked leaves. Ecuagenera.



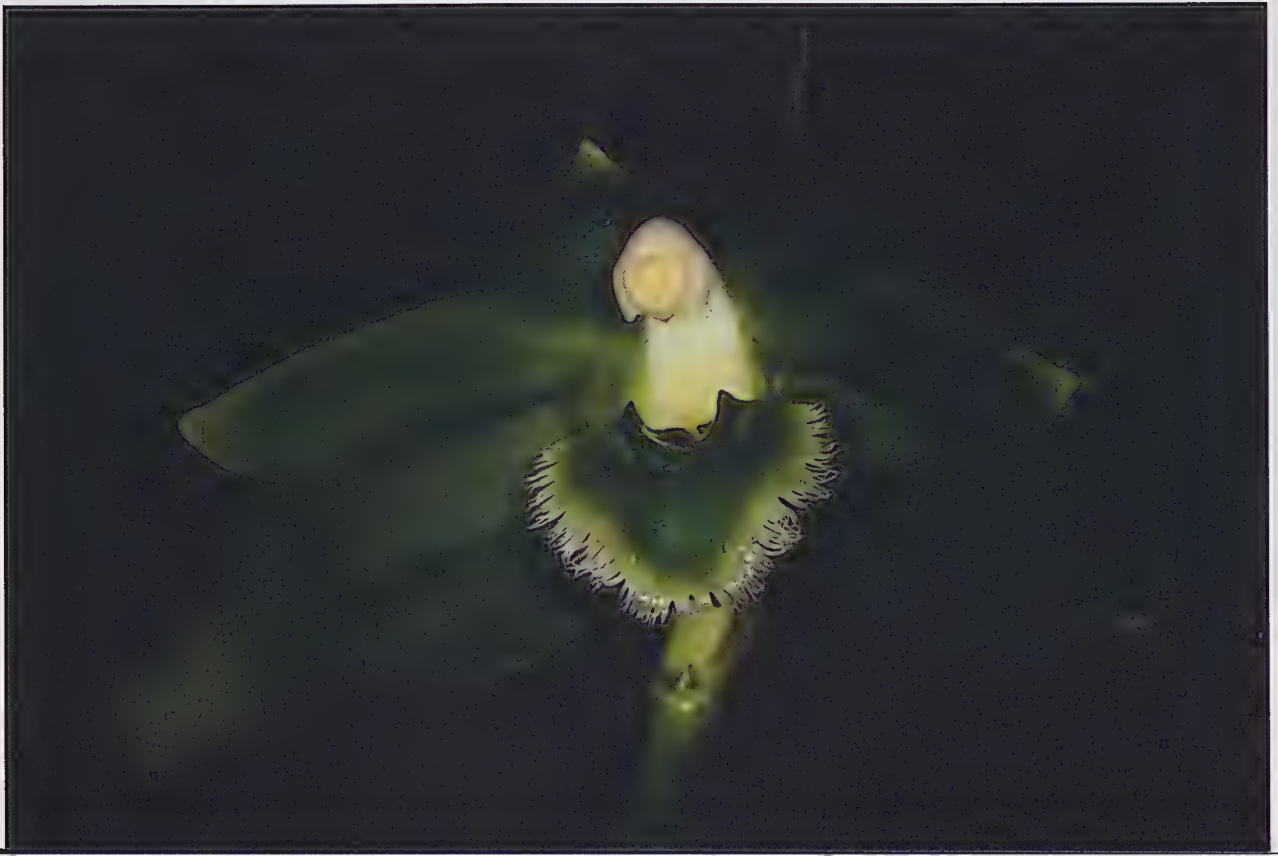
▼ *Byrsella velifera* [syn. *Masdevallia velifera*] SM/22WOC from Antioquia, Colombia attracts flies with its unpleasant faecal scent. Ecuagenera.





▲ *Sobralia fimbriata* is a small growing plant which produces these 5 cm wide flowers that last for one day. Universidad de Cuenca.

▼ *Ida locusta* [syn. *Sudamerlycaste locusta*] produces a night scent of green apples. The scent from this Peruvian species attracts a night-flying moth for pollination. Ecuagenera.



▼ A species of bee is attracted to the strong daytime scent like Vicks Vaporub on this *Anguloa uniflora*. Upon climbing onto the hinged jug-like lip, the bee is eventually thrown against the column of this Peruvian species. Ecuagenera.



▼ The large lip of *Epidendrum kymatochilum* reminds me of a panting dog with its tongue hanging out. It is a cool-growing miniature Ecuadorian species found between 2,800-3,500 m elevation. Ecuagenera.



► Blooms of *Cyrtorchilum cumandae* SM/22WOC which are 7 cm long are carried well away from the plant on a spreading vine-like panicle. Ecuagenera.

► Endemic to Colombia and named for the Choc region, *Restrepia chocoensis* BM/22WOC has distinctive spotted flowers as well as dark stems with spotted sheaths. It grows in cloud forests between 1,800-2,000 m altitude. Ecuagenera.

▼ *Maxillaria sanderiana* f. *xanthina* BM/22WOC is a rare colour form of the normally white-flowered species from Ecuador and Peru. The typical form also has red-purple markings and the single flowers are often borne on pendent stems. Ecuagenera.



► *Acronia volans* f. *xanthina* [syn. *Pleurothallis volans*] is the yellow form of the species which bears a series of single non-resupinate flowers that are 1.5 cm across. Ecuagenera.

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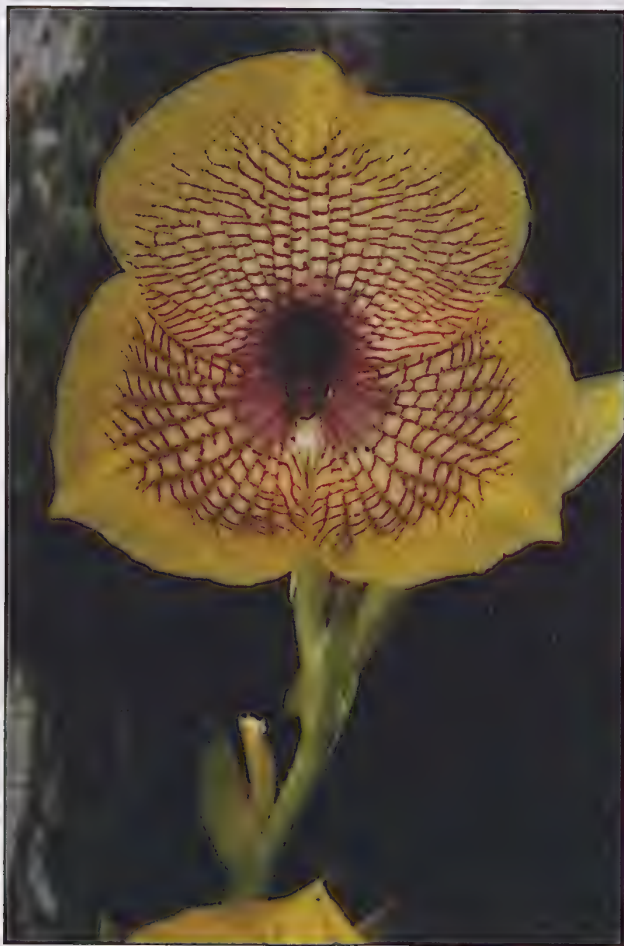
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► *Acronia lynniana* [syn. *Pleurothallis lynniana*] produces a series of single non-resupinate flowers from a sheath at the base of the leaf. Frog-on-leaf orchid is a name that has been used for this group of pleurothallids. Ecuagenera.

▼ *Telipogon hausmannianus* SM/22WOC was part of a group of about 10 plants exhibited by the Jardín Botánico de Quito and Asociación de Orquideología de Quito. Telipogons have a reputation for being difficult to cultivate, requiring cool, moist, breezy cloud forest conditions.



▼ *Caucaea olivacea* belongs to a cool growing genus and requires cloud forest conditions year round. Members of this genus are rare in Australian collections. Equafflor-A





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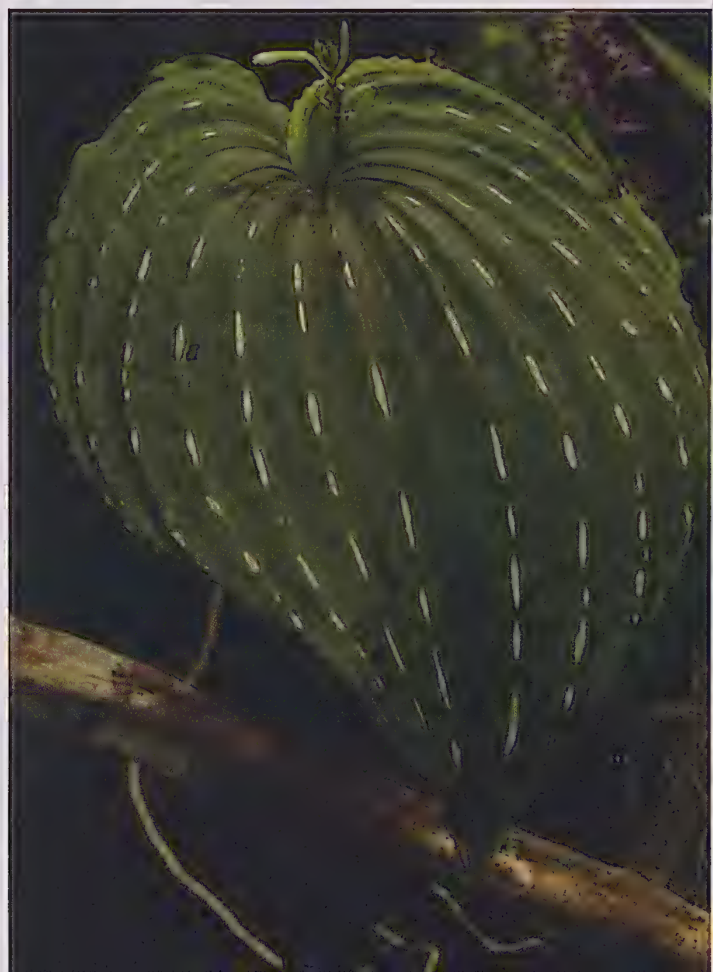
AORI 025

► *Zootrophion alvaroi* carries two individual flowers that are fully open. The pollinator enters the eye-like slit on each side of the joined sepals. Ecuagenera.

▼ *Cattleya warscewiczii* GM/22WOC was an outstanding example of a Colombian endemic. This species is rarely seen in cultivation in Australia. Ecuagenera.



► *Monophyllorchis microstyloides* is a terrestrial plant noted for its tall stem with single attractively patterned leaf rather than its tubular yellowish flower [not open], Ecuagenera.



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▲ *Sigmatostalix minax* [syn. *Oncidium minaxoides*] belongs to a monophyletic genus that can be distinguished by the long slender column. This Colombian and Ecuadorian species has a prominent trilobed oil-bearing yellow callus. Ecuagenera.



◀ *Colombiana aspergillum* [syn. *Pleurothallis aspergillum*] eventually bears a series of single flowers that seem to emerge from the apex of the leaf. The peduncle merges with the leaf mid-vein and the individual blooms open in succession over a long period. Ecuagenera.

▼ Described from Peru in 2002, *Phragmipedium kovachii* opened too late for judging consideration. Ecuagenera.





▲ *Thunia bensoniae* from north-east India, Myanmar and Thailand is rare in cultivation in Australia. Ecuagenera.



▲ *Encyclia fowliei* is distinctive with its striated-tessellated flowers and hails from Brazil. Ecuagenera.

◀ A finely-grown example of *Dendrobium vexillarius* GM/WOC from the highland cloud forest of New Guinea. Ecuagenera.

► *Acronia dilemma* [syn. *Pleurothallis dilemma*] holds these 2 cm wide blooms on succulent narrow leaves that are distinctly bilobed or forked at the apex. Ecuagenera.

▼ *Odontoglossum deburghgraeveanum* [syn. *Oncidium deburghgraeveanum*] from Ecuador was described in 2010. It is related to *Odontoglossum harryanum*, *Odontoglossum vellum* and *Odontoglossum helgae* but can be distinguished by the column structure and the base of the lip. Ecuagenera.



► Found in Venezuela and Peru, *Fernandezia maculata* is a miniature plant with proportionately large single flowers that are 1 cm high. The genus is included in *Oncidiinae*. Ecuagenera.

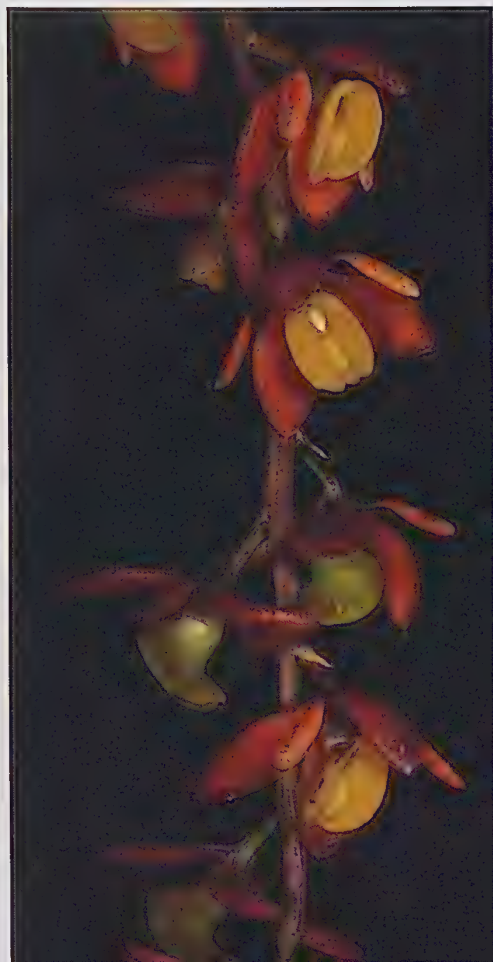




▲ Usually the flowers of *Encyclia cyperifolia* are non-resupinate. It has very small pseudobulbs as well as narrow linear leaves. Ecuagenera.

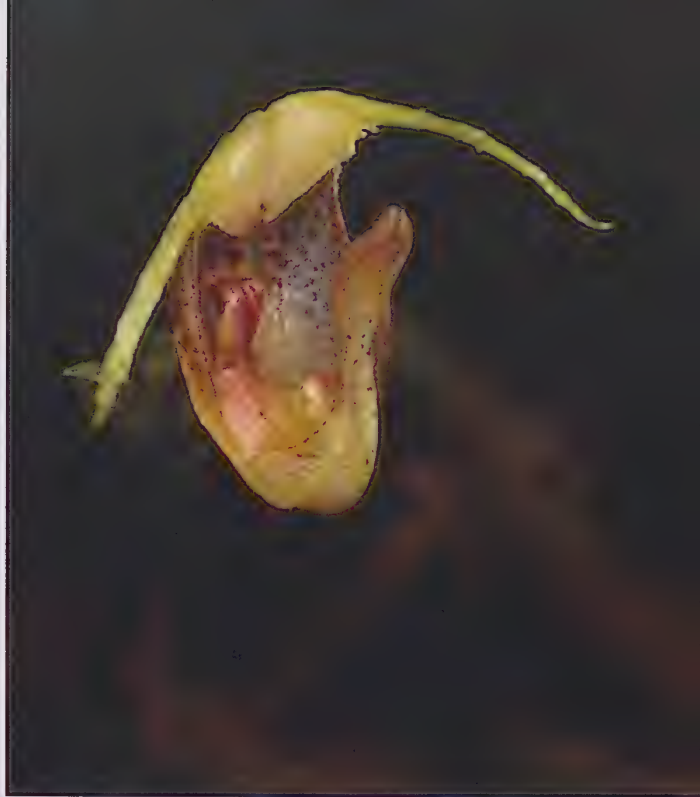
▶ *Epidendrum laucleanum* is a montane species that is widely distributed in Central America. It bears many 1 cm wide flowers along the 20-35 cm long rachis. Ecuagenera.

▼ *Ancistrochilus rothschildianus* is a widespread warm tropical African species. Plants need to be kept drier when deciduous. Ecuagenera.



► *Scaphosepalum portillae* has a 15 mm wide flower which has a spring-loaded lip that holds the pollinator against the column. Equaflo-A.

▼ *Systeloglossum ecuadorensis* is included in Oncidiinae. The successive flowers are 17 mm across. It has joined lateral sepals that project downwards and are attached to the base of the column-foot. Mundiflora.



▼ *Spectaculum racemosum* [syn. *Masdevallia racemosa*] from cloud forests in Colombia has a rambling growth habit and carries several brilliantly coloured tubular blooms on upright stems. Equaflo-A.



► *Epidendrum bracteolatum* grows in dry lowland forests in Ecuador. The flowers are 3.5 cm across. Asociación Ecuatoriana de Orquideología.

▼ *Bulbophyllum lindleyanum* SM/22WOC sported several racemes in one of the wardian cases. The small flowers on this miniature plant are about 1 cm across and open progressively. Ecuagenera.



▼ *Dichaea trulla* produces single flowers that last only a few days. Despite the leafy stems which often look like a fish-bone fern, the genus is included in the subtribe Zygopetalinae. Ecuagenera.



▶ *Phragmipedium fischeri* is allied to *Phragmipedium schlimii* but can be distinguished by the different staminode shape and more intensely rose-coloured flowers. Ecuagenera.



▼ *Stenotyla picta* bears these single flowers from the base of fan-shaped leafy growths which do not have obvious pseudobulbs. Known only from Costa Rica and Panama, this species grows in cloud forests between 1,400-2,100 m elevation. Ecuagenera.



▶ ▼ Numerous small flowers made up three dense panicles forming yellow clouds above *Oncidium nebulosum* SM/22WOC. Ecuagenera.



▼ Plants of *Paphiopedilum gratrixianum* var. *guangdongense* such as this were seen in the sales area. Hengduan Biotechnology Co. Ltd.



▲ *Oerstedella pseudoschumanniana* [syn. *Epidendrum pseudoschumanniana*] stood several metres tall behind the phragmipediums. Ecuagenera.

◀ *Epidendrum oraion* from Ecuador stands 2 metres tall by the side of the landscaped phragmipedium exhibit. Ecuagenera.

▶▲ *Sigmatostalis graminea* [syn. *Oncidium gramineum*] SM/22WOC grown to perfection. The tiny flowers are 8 mm across. Ecuagenera.

▼ Three large 17 cm long flowers on *Regalia princeps* [syn. *Masdevallia princeps*] SM/22WOC from Peru attracted the judges' attention. Ecuagenera.





▲ *Sotosanthus shephardii* is a small-growing plant from Colombia and Ecuador. Unusual for Stanhopeinae it produces upright stems with these 2.5 cm flowers below the leaves. Ecuagenera.

▼ *Phragmipedium schlimii* var. *manzurii* was first described as a new species from Colombia in 2008. Phillip Cribb reduced it to a variety of *Phragmipedium schlimii* in 2016. Note the branched inflorescences. Ecuagenera.





◀ ▲ Grand Champion Orchid was *Dendrobium parvulum* 'Violet Blue' GM/22WOC. This plant measured 12.5 cm across and the individual flowers of this bifoliate species are only 5 mm wide. Ecuagenera.

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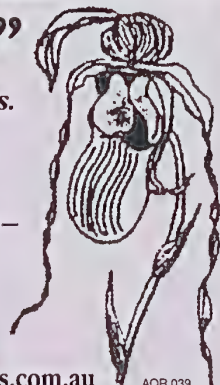
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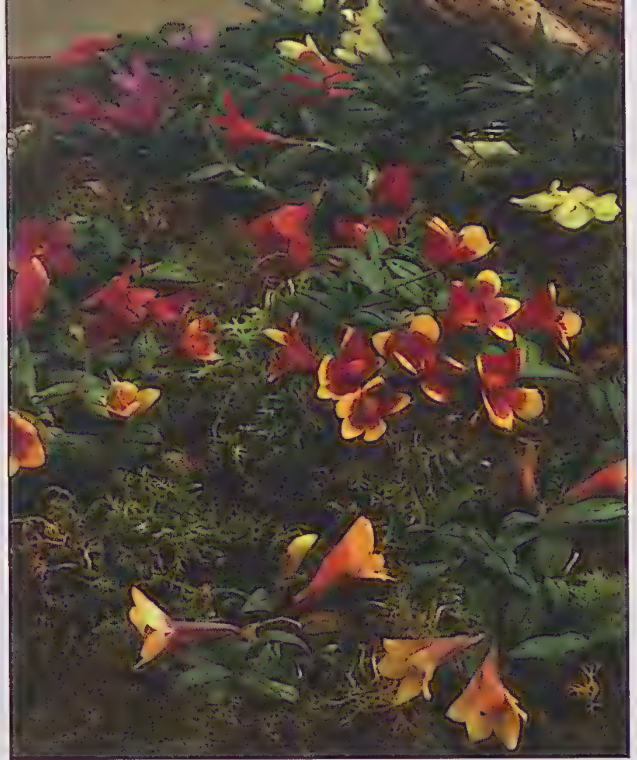
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▲ Flower of *Maxillaria callichroma* selected as Champion Specimen. Ecuagenera.



▲ Multicoloured *Maccraitha sophronitis* [syn. *Dendrobium sophronitis*] contributes stunning colour to one of the wardian cases. This species with its warty leaves is usually incorrectly exhibited as *Maccraitha cuthbertsonii* [syn. *Den. cuthbertsonii*] which has glabrous or smooth leaves. Ecuagenera.

▼ *Dendrobium* wardian case with mostly miniature cloud forest species awarded GM/22WOC. Ecuagenera.



► *Catasetum expansum* is extremely variable in colour. These are male flowers. They can be cream to yellow or green, sometimes with red or maroon spots or markings on the segments. Asociacion Ecuatoriana de Orquideología, Guayaquil.

▼ *Maxillaria molitor* from Colombia and Ecuador is variable in colour. Flowers range from cream, through various shades of yellow to deep orange. The lateral sepals usually have recurved apices. Ecuagenera.



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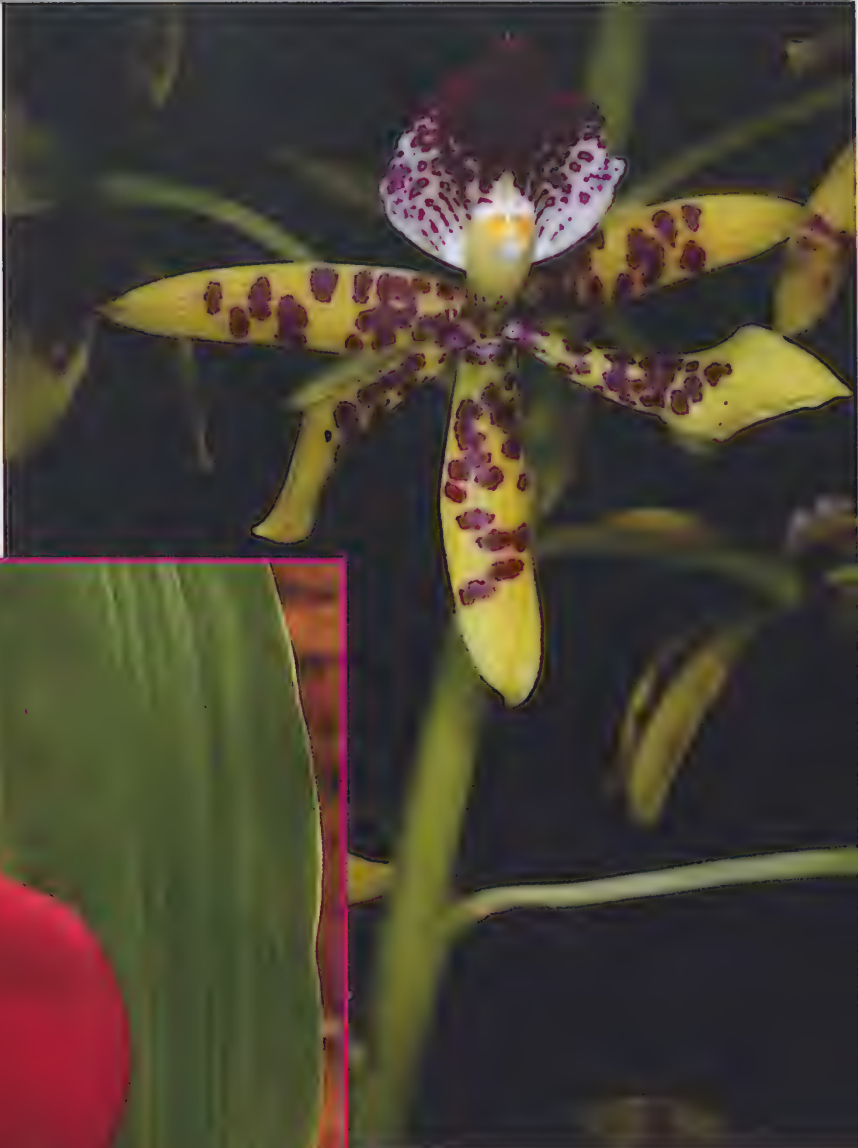
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AOR 124

▶ *Anacheilium sceptrum* [syn. *Prosthechea sceptrum*] produces long spike-like racemes with numerous flowers that are 3 cm across. Ecuagenera.

▼ *Lycaste Rakuhoku* GM/22WOC was the Best *Lycaste*, *Anguloa*, *Sudamerlycaste* Hybrid. Sociedad Colombiana de Orquideología.



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Scuticaria steelei,

John Moss and Matthew Steele

by Rudolf Jenny

Scuticaria steelei (W.J.Hooker) Lindley, *Edwards' Botanical Register* 29:misc.14.18

Synonyms:

- *Maxillaria flagellifera* Lindley, *Edwards' Botanical Register* 23:sub t.1986.1837 (nomen nudum)
- *Maxillaria steelei* W.J.Hooker, *Curtis's Botanical Magazine* 64:t.3573.1837
- *Scuticaria keyseriana* hort., *Journal of Horticulture and Cottage Gardener* 16:421 & fig.55.1888

Scuticaria steelei is one of the very earliest imported and "cultivated" orchid species. Although the methods of orchid cultivation in the early days were rather strange as they were kept under extremely warm to hot and humid conditions and most of the plants survived only a very short time. In 1837 William Jackson Hooker described in *Curtis's Botanical Magazine* a plant from the collection of John Moss of Otterspool, Liverpool, England, as *Maxillaria steelei* (the original spelling of the epithet was *steelii* however this was recently corrected to *steelei*). The plant had been collected by Matthew Steele in Demerara (today part of Guyana) and was sent in July 1836 to England. When it flowered, Miss Moss (daughter of John Moss) made a drawing which was used for the illustration which Hooker published, together with the first description (the plant is shown upright instead of hanging down). Hooker wrote: "With the flower of *Maxillaria*, it has foliage quite at variance with any described species of the Genus, attaining a height of two and even three feet, and proves a most valuable addition to our Epiphytes". The very same drawing was used again in May of the same year in the seldom seen journal *L'Horticulteur Belge, Journal des Jardiniers et des Amateurs*, edited by Michel Joseph François Scheidweiler, together with the repetition of Hooker's description and text. F.C. Hoehne used the same drawing in 1953 to illustrate the species in his *Flora Brasiliica*.

John Lindley described and illustrated *Maxillaria steelei* in 1837 in *Edwards' Botanical Register*: he wrote: "A native of Demerara, where it would seem to be common if we are to judge from the large quantity of it has been introduced within these two last years. When it first came over I called it *Maxillaria flagellifera*, in allusion to the thong-like leaves and under that name it exists in many collections; but the name not having been published must, of course, give way to that of *Maxillaria steelei*, under which it was first described, in May last, by Sir W.Hooker". The drawing was made by Sarah Ann Drake in September 1836 after a plant cultivated by Loddiges, Hackney, London. The binomial *Maxillaria flagellifera* is a nomen nudum (naked name i.e. mentioned without description). In 1843 Lindley published in *Edwards' Botanical Register* a systematic treatment of the *Maxillaria* alliance,

where he described several new genera including *Promenaea*, *Warrea*, *Paphinia*, *Lycaste* and *Scuticaria* and also renamed his *Maxillaria steelei* as *Scuticaria steelei*.

In 1869 in the journal *Gartenflora*, E. Mayer, a gardener of Karlsruhe, Germany, published a short article about *Scuticaria steelei* together with a coloured illustration. He wrote that the species had become - unlike about 30 years earlier - a great rarity in cultivation. The illustrated plant was imported by Linden in Belgium and was purchased by Mayer. *Scuticaria steelei* made a remarkable impression when in flower, and several flowering plants were mentioned in *Gardeners' Chronicle*: in 1878 one from E. Wright, Birmingham, then in 1885, 1887 and 1890 plants from the collection at Kew, and in 1889 from E.F. Hubbock, of The Hawthorns, Redhill, England. The species was also illustrated in the famous *Orchid Album* from Robert Warner, and in 1883 Benjamin Samuel Williams and Thomas Moore illustrated the species with a drawing made from a plant in cultivation with W. McDonald, Woodlands, Perth, Scotland. John Day also illustrated the species in his "Scrap Books" with a beautiful drawing of a flowering plant in the collection of the nursery of William Bull, Chelsea, dated 9th August 1883.

Scuticaria keyseriana, mentioned and illustrated in 1888 in *Journal of Horticulture and Cottage Gardener* is a synonym of *Scuticaria steelei*, the plant was exhibited by Sander, of St.Albans in May 1888 at the Temple Show of the Royal Horticultural Society. Sander had imported it from the Roraima area of Brazil and named it after the Lord Mayor of London, Sir Polydore de Keyser (1832 –1898).

Today the genus *Scuticaria* consists of 9 or 10 species, all from Brazil, Venezuela or the Guianas, with the one exception of *Scuticaria salesiana* Dressler from Ecuador which was described in 1968. *Scuticaria salesiana*, *Scuticaria steelei* and *Scuticaria hadwenii* are seen at shows from time to time, but the other members of the genus are rarely seen in cultivation. Some species like *Scuticaria hadwenii* and *Scuticaria strictifolia* are very variable both in the size of the plant and the colour of the flowers. Some species grow terrestrially with erect leaves or as lithophytes like *Scuticaria irwiniana*.

John Moss was born on 18 February 1782 in Liverpool. His father, Thomas Moss, was a wealthy timber and general merchant. At the age of 21 years, in 1803 John Moss became a partner in his father's business. When Thomas Moss died in 1805 each of his three sons inherited £10,000; John used part of this money to set up a bank (Moss, Dales & Rogers), then in September 1805 John married Hannah Taylor and together they had 9 children: 5 sons and 4 daughters. Up to 1811 the family lived in Mossley Hill, then they moved into the newly erected Otterspool House where John erected a series of greenhouses, and imported plants from his West Indian plantation to fill them. Otterspool became famous for the outstanding orchid collection and one of the most famous plants in this collection was *Cattleya mossiae*. The species had

been imported from Venezuela by George Green also of Liverpool and flowered for the first time in Moss's collection and in naming it William Jackson Hooker dedicated it to Hannah Moss. In 1840 Hooker wrote: "From the collection of John Moss, Esq., of Otterspool, Liverpool, which, partly owing to that gentleman's extensive South American correspondents and connexions, and partly to the skill of his gardener, Mr. James, bids fair to rival some of the many collections of Orchideous plants of which the country may well be proud. The plant *Brassavola cuspidata* (sic.) was sent from Trinidad with about fifty others of the same family by Roberts, Esq. Otterspool".

Moss's uncle James had a plantation on Crooked Island in the Bahamas, in 1818 he started to make plans to move his entire workforce of slaves to Demerara-Essequibo i.e. British Guiana. When James died at Nassau on 23 October 1820, he bequeathed his estate and the slaves to the three sons of Thomas Moss. After many difficulties in obtaining the formal permission and after purchasing the land for a sugar-cane plantation in Demerara, in 1823 the three brothers started to

move the slaves. Beside his involvement with the plantation in Demerara, John Moss was also involved in the building of several railways in Great Britain, France and the Netherlands. John Moss died in Otterspool House on 3 October 1858 and his eldest son Sir Thomas Edwards-Moss inherited the property.

Very little is known about Matthew Steele. He was born in 1799 in Ireland then around 1820 he went to Liverpool and became a partner in Steele, Loxdale & Co. He obviously owned plantations in Demerara (British Guiana) and for at least some of the time lived there with his family. Murray Brothers & Co. a company in Liverpool in which he was partner also had a branch in Georgetown. Around 1830 he married Sophia Charlotte Bagot and had 10 children with her. Matthew had an interest in botany and in all probability he had contact with John Moss; in Demerara he collected orchids and other plants and sent several consignments to Liverpool, in July 1836 one of them included the first plant of *Scuticaria steelei*. Matthew Steele died on 2 October 1860 in Litherland, near Liverpool, aged 61.





Scuticaria Steele, Botanical Register, Vol. 23, 1837, t. 1985



Scuticaria steelei

Scuticaria steelei, Gartenflora
Vol. 18, 1869, t. 622



Scuticaria steelii,
Orchid Album,
1883, 455



Scuticaria steelii, John Day

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SCUTICARIA KEYSERIANA.

At the Temple Show of the Royal Horticultural Society last week, Messrs. Sander & Co., St. Albans, exhibited a plant of a new *Scuticaria* from the Roraima district, and which was named in honour of the Lord Mayor of London, *Scuticaria Keyseriana*. It has the same habit as the other species, *S. Steelii*, *S. Hadweni*, and *S. Dodgsoni*, which are all South American, the leaves being



FIG. 25.—*SCUTICARIA KEYSERIANA*.

several feet long, cylindrical or quill-like, and pendulous; the flowers fleshy, with broad petals and sepals heavily spotted with purplish maroon on a yellowish ground; the lip broad, open, and streaked with a similarly dark colour on a lighter base. The plant is a handsome one, owing to the clear well-defined markings.

Scuticaria Keyseriana J. Hooker, Cottage Gardener 1883, Vol. 15



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Scuticaria hadwenii

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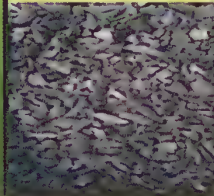
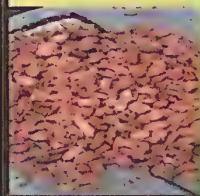
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Prasophyllum copelandii
- from Carrai, NSW
(TYPE location)

Prasophyllum copelandii (Orchidaceae: Prasophyllinae) a threatened new species of leek orchid from northern New South Wales

by David L. Jones

Abstract

Prasophyllum copelandii, in the *Prasophyllum fuscum* R.Br. complex, is described here as new. The new species is compared and contrasted to its closest congener, *Prasophyllum rogersii* Rupp, and notes are given on its distribution, habitat, etymology and conservation status. The new species also has general similarities with *Prasophyllum caudiculatum* D.L.Jones but differs in several important morphological features (see notes under Similar Species).

Key Words

Orchidaceae, *Prasophyllum copelandii*, *Prasophyllum fuscum*, *Prasophyllum rogersii*, *Prasophyllum caudiculatum*, new species, New England Tableland, New South Wales, Australian flora.

Introduction

Lachlan Copeland, an enthusiastic field botanist with a special interest in the Orchidaceae, has for many years been carrying out detailed botanical surveys in many regions of New South Wales, with a special emphasis on the Northern Tablelands. These studies have resulted in the discovery of several new species of orchid which have been described collaboratively in this journal (Jones & Copeland 2014; 2016; 2017; 2018). In a recent survey of the Carrai Plateau, Lachlan discovered a single population of a colourful new leek orchid which I am pleased to name in his honour.

Taxonomy

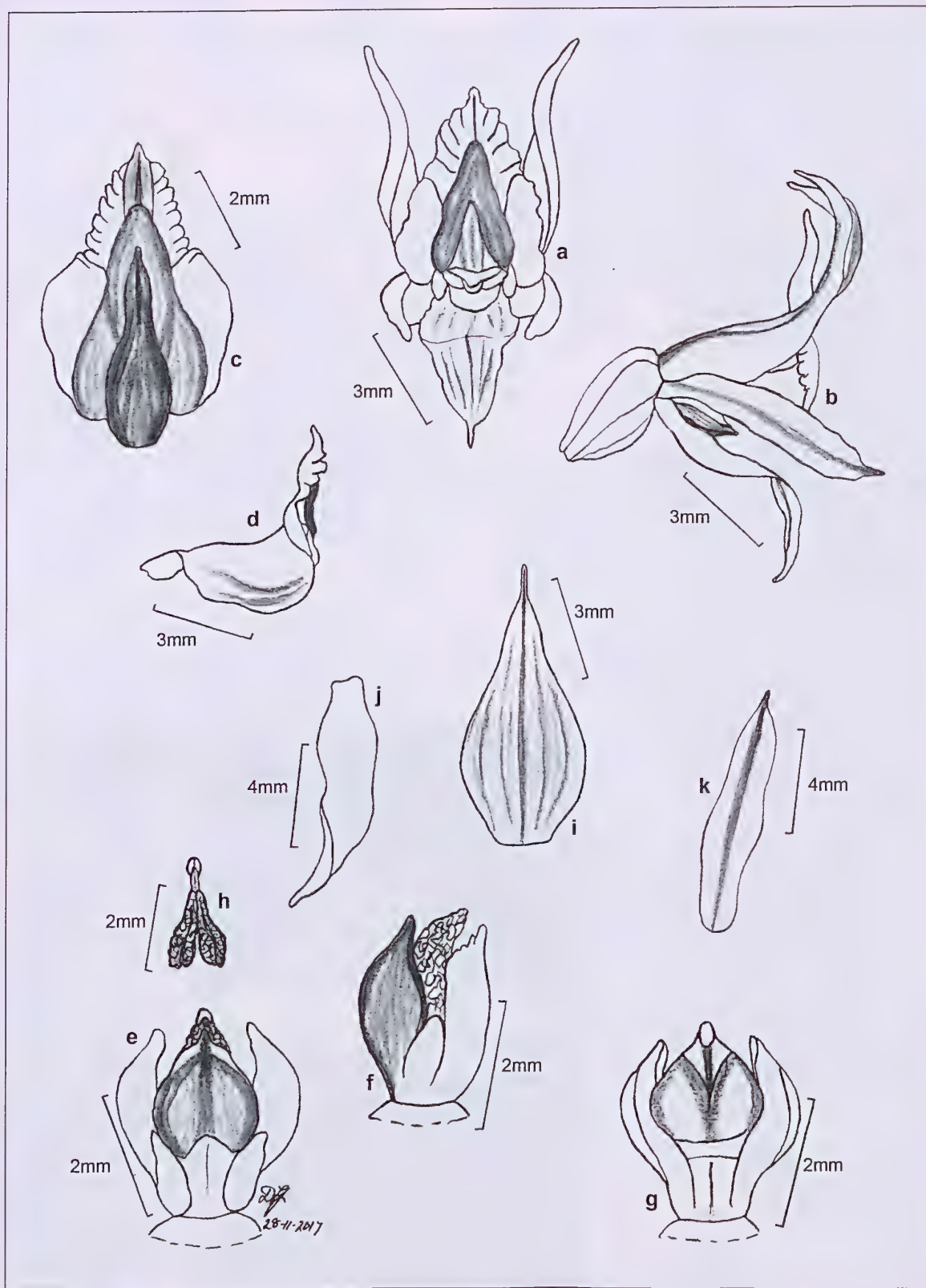
1. *Prasophyllum copelandii* D.L. Jones, *sp. nov.* With affinity to *Prasophyllum rogersii* Rupp but differing by its colourful flowers (reddish brown tepals with yellowish margins and a pale yellow to yellow labellum lamina with a darker greenish yellow to yellow callus (*P. rogersii* has green or orange-brown to reddish brown tepals and a tan or orange labellum lamina with a green callus), dorsal sepal with an extended apiculus (no apiculus in *P. rogersii*), smaller, flatter labellum callus (large, deeply

channelled callus in *P. rogersii* with strongly raised and thickened distal margins), strongly incurved column wings about as high as the rostellum (*P. rogersii* has straight or shallowly curved column wings shorter than the rostellum), short rostellum about as high as the callus plate (*P. rogersii* has a narrow elongated rostellum extending well above the stigmatic plate).

Type: New South Wales: North Coast: Carrai Aboriginal Area, c. 2 km east of Marys View Lookout, c. 65 km due west-north-west of Kempsey (exact location withheld for conservation purposes), 28 Nov. 2017, L.M. Copeland 4540 & P. Thomas (holo CANB; iso NSW).



Prasophyllum copelandii
– floral detail



***Prasophyllum copelandii*, Carrai, NSW, L.M.Copeland 4540 (Fig. 1.)**

a. flower from front; b. flower from side; c. labellum from above, flattened; d. labellum from side; e. column from rear; f. column from side; g. column from front; h. pollinarium; i. dorsal sepal; j. lateral sepal; k. petal.

© D.L.Jones, drawn from type collection 28 November 2017.

Description: Slender, glabrous, terrestrial, tuberous herb 30-40 cm tall. *Tubers* not seen. *Leaf* terete, 25-35 cm long, dark green; base 2-3 mm across, reddish; free lamina erect to suberect. *Floral bracts* broadly ovate, c. 2 mm long, c. 2 mm wide, closely sheathing the short pedicel. *Ovary* obovoid, 3.5-4 mm long, 2-2.5 mm wide, green, shiny, at c. 40° to the rachis. *Inflorescence* a loose slender spike 7-12 cm long, consisting of 10-20 well-spaced flowers. *Flowers* subsessile, 9-12 mm long, 5-7 mm across, opening

widely; tepals reddish brown with yellowish margins, petals pale yellow with a broad red-brown central band, labellum pale yellow to yellow with a darker greenish yellow to yellow callus. *Dorsal sepal* deflexed but incurved, ovate-lanceolate, 6.5-7.5 mm long, 3-3.5 mm wide, 3 darker striae prominent, 2 striae less prominent; apex often recurved, with a linear apiculus c. 1 mm long. *Lateral sepals* free, erect and recurved, more or less parallel, linear-lanceolate, 7-8.5 mm long, c. 2.2 mm wide; distal margins entire, involute,

long-acuminate. *Petals* incurved to weakly spreading, linear, 8-9 mm long, c. 2 mm wide, shortly apiculate. *Labellum* shortly stalked; proximal half porrect to obliquely erect, sharply recurved back on itself at c. 90° near the middle; distal half arising at a steep angle to the basal portion, straight or shallowly recurved. *Labellum lamina* ovate-lanceolate in outline when flattened, 7-7.5 mm long, 3.5-4 mm wide; basal two-thirds broadly quadrangular-elliptical, not gibbous when viewed from the side, margins entire; proximal third tapered to the apex, margins strongly and irregularly crispate/crenulate, apex subobtusely. *Callus* c. 5.5 mm long, c. 3 mm wide, ovate lanceolate, ovate-elliptic in the basal two-thirds and then narrowed and tapered, raised, fleshy, channelled centrally, extending nearly to the labellum apex, sometimes a tail-like extension extending to the apex. *Column* porrect from the end of the ovary, c. 3 mm long, c. 3 mm wide, visible from the side in the gap between the dorsal sepal and the petals; appendages strongly incurved, oblong, c. 2.8 mm long, c. 0.8 mm wide, whitish, apex obtuse to shortly and irregularly lobed. *Anther* ovate, c. 1.6 mm long, c. 1.5 mm wide, purplish brown, about as wide as the stigmatic plate. *Pollinarium* c. 2.3 mm long; viscidium ovate, c. 0.2 mm long; hamulus ligulate, c. 0.5 mm long; pollinia narrowly clavate, c. 1.7 mm long, yellow, sectile. *Stigma* elliptic, c. 1.3 mm long, c. 1.5 mm wide; rostellum slightly higher than the appendages. *Capsules* not seen. **Fig. 1.**

Distribution and ecology: Currently known only from a single population on the north-western side of the Carrai Plateau, approximately 65 km west-north-west of Kempsey in north-eastern New South Wales. Plants occur at an altitude of 950 m and grow in a moist sandy loam derived from granite in wet heath dominated by low shrubs of *Grevillea juniperina* subsp. *allojohnsonii*, *Leptospermum gregarium* and *Hakea microcarpa*. Associated grasses and forbs include *Themeda triandra*, *Schoenus apogon* and *Gonocarpus micranthus*.

Flowering period: Flowering plants have only been observed in late November but the presence of numerous plants in late bud suggest that the peak flowering time would be early December.

Recognition: *Prasophyllum copelandii* is a slender species that can be recognised by its uncrowded colourful flowers (reddish brown tepals with yellowish margins and a pale yellow to yellow labellum lamina with a darker greenish-yellow to yellow callus); recurved dorsal sepal ending in a linear apiculus, erect and recurved, more or less parallel lateral sepals, and porrect to incurved petals ending in a short apiculus.



Prasophyllum caudicolum
- Wards Mistake, NSW

Similar species: *Prasophyllum copelandii* is part of the *P. fuscum* R.Br. complex and has close affinities with *P. rogersii* Rupp, however, both species have different labellum structures. *Prasophyllum rogersii* has a pink, tan or orange labellum lamina (rarely white) and a large green or yellowish, deeply channelled callus with ridge-like distal margins that dominate the labellum. The labellum lamina margins are sparsely folded with short irregular crenulations. By contrast the labellum lamina of *P. copelandii* is pale yellow to yellow with a much less prominent, smaller, darker greenish-yellow to yellow, shallowly channelled callus which does not have strongly ridged distal margins. The labellum lamina margins are strongly crenulate with numerous indentations. Additionally, the callus of *Prasophyllum rogersii* is much larger than the new species and has strongly mounded basal margins; by contrast the callus margins of *P. copelandii* are much smaller and relatively flat. Differences are also apparent in the column – that of *P. copelandii* has strongly incurved column wings about as high as the rostellum (which itself is relatively short), whereas those of *P. rogersii* are straight or shallowly curved and shorter than the rostellum (which is narrowed and elongated, extending well above the stigmatic plate). Other differences in *P. copelandii* include a shorter hamulus on the pollinarium, longer tepals, the dorsal sepal with an extended apiculus (no apiculus in *P. rogersii*), lateral sepals entire, long-acuminate (shortly bidentate in *P. rogersii*), and narrower petals. Both species also have distinct flowering

times (*P. rogersii* flowers in February, *P. copelandii* in November/December) and habitat preferences (*P. rogersii* grows among grasses and sedges on soils derived from basalt and *P. copelandii* grows among dense shrubs in a granitic swamp).

Prasophyllum copelandii also shares general floral similarities with *P. caudiculatum* D.L.Jones which occurs naturally less than 100 km away. *Prasophyllum caudiculatum* however, can be distinguished readily by its papillate lateral sepals (smooth in *P. copelandii*) with bidentate tips (entire in *P. copelandii*), a suborbicular labellum lamina (ovate-lanceolate in *P. copelandii*) which contracts suddenly in the distal third to a narrow tail, and a suborbicular callus (both features apparent when the labellum is flattened) compared with an ovate-lanceolate callus in *P. copelandii*.

Conservation Status: Currently known only from a single population of about 15 plants but the abundance of suitable habitat in the immediate area suggest that the species could be more common and widespread. The land has restricted access due to its high cultural heritage significance and is currently managed for conservation by the NSW National Parks and Wildlife Service. Feral pigs are common in the area and have been observed to be damaging the swampy habitat. Given the very low numbers of the orchid, highly restricted distribution, and ongoing threats, the species is likely to meet the criteria of “Critically Endangered” under both state and commonwealth legislation. A ROTAP code of IECit would be appropriate following the criteria of Briggs and Leigh (1996).

Etymology: Named in honour of Lachlan Mackenzie Copeland (1973-), enthusiastic botanist, ecologist and naturalist with a special interest in native orchids, combined with a comprehensive knowledge of the flora and fauna of the Northern Tablelands of New South Wales. Lachlan spends a lot of time on field work and has a discerning eye with the discovery of many new species of native plants, including orchids, to his credit. Lachlan also took the colour images used in this paper.

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Prasophyllum rogersii
- Barrington Tops, NSW

The Chemistry of Coconut Peat

by Andrew Schell

As the ground-up seed husk tissue from the coconut palm tree, coconut peat (coco coir) has become a popular and effective growing medium for indoor and outdoor gardeners and orchid growers. Here are the details on what exactly coco coir is made of and how to best grow with it. For starters, using a coco-specific base nutrient is the key to successful gardening with this medium.

Coco coir, also known as coconut coir, coconut peat, cocopeat or coir peat, is the ground-up seed husk tissue from the coconut palm tree (*Cocos nucifera*). It is an environmentally friendly grown medium since coconut husk is a renewable, biodegradable resource.

Almost 3 billion coconuts per year are harvested in Sri Lanka alone. Other major producers of coco coir include India, Mexico, the Philippines, Guyana, Costa Rica and Indonesia. The coconut's fibre has found its way into many products, including cars, packaging, insulation, ropes and matting, and many growers are now using coco coir as their gardening medium of choice.

The layer of the coconut containing the tissue that becomes coco coir is called the mesocarp. While it looks and feels like soil, coco coir is an inert medium that also shares many properties with hydroponics. Primarily, coco coir holds a substantial amount of water, holding almost ten times its own weight in moisture. The tough yet lightweight fibres are also fairly resilient to the elements.

Coconut's woody, structural tissues consist of roughly two-thirds carbohydrates and one-third lignin. The carbohydrates are the complex polysaccharides cellulose and hemicellulose. Lignin is a complex polymer. These are the most prominent organic polymers on Earth. With large reserves of cellulose and lignin as energy storage, coco coir readily becomes a breeding ground for beneficial micro-organisms.

The beneficial microcosm in the root zone of plants grown in coco can also include bacteria, which are technically referred to as plant-growth promoting rhizobacteria (PGPR). Many beneficial fungi include mycorrhizae, yeasts and more. Fungi such as *Aspergillus nidulans* produce enzymes called cellulases that break down the cellulose in the coco fibres. At this point, the coir becomes a carbon source (energy) for all the micro-organisms in the soil and the plants themselves.

Using a coco-specific base nutrient is the key to successful gardening with this medium. Coir possesses significant amounts of natural potassium (K) and phosphorus (P). It also contains trace amounts of nitrogen (N), calcium (Ca), magnesium (Mg), boron (B), chlorine (Cl), copper (Cu), iron (Fe), manganese (Mn), molybdenum (Mo) and zinc (Zn). A base nutrient designed for a coco grow medium should reflect this composition and should have a lower P-K value than a base nutrient ideal for soils and hydroponics. The microflora living in coco requires nitrogen and removes it from the coir in a process called nitrogen drawdown. To balance this drawdown, a coco-specific base nutrient should have a higher nitrogen percentage than a base for soil and hydroponics.

Since coconut trees grow by the ocean, coco coir contains a high concentration of sodium (salt) and chlorine that can be detrimental to plants in high concentrations. A good-quality coco medium should be thoroughly washed and leached of these elements. Also, coco treated in alkaline (basic) calcium nitrate solution saturates binding sites of the coco fibres, thereby preventing possible deficiencies.

Pre-soaking the fibres in an alkali treatment has been shown to increase the tensile strength of coco fibres by almost 30%. Check to see if the manufacturer of your preferred coco brand is buffered with calcium.

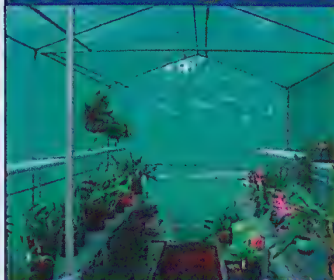
As a rule of thumb, be cautious when selecting bales and bricks of coco. The drying and compressing of the fibres creates dust, and it is a lot of work to decompress coco coir. Most bales of dried coco are compressed in a 6:1 ratio. Too often, waste-grade coir and coir dust is pressed into these bricks. The medium needs to be sieved to remove the small particles. A high-quality coco should not contain any dust or tiny coco particles, as it can be compacted easily, thereby depriving the roots of oxygen and water.

The pH of coco coir is naturally between 5 and 6.5 – an ideal range for most plants. This gives the medium a distinct advantage over other mediums that need pH conditioning before use. Coco works best with 10% perlite added to it to aerate it further and prevent compaction. ■

Andrew Schell
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Striking Cymbidium Backbulbs: Advice for Novice Growers

by Brian Milligan

For the benefit of novice growers, I should explain that a back-bulb is a pseudobulb that has lost all its leaves, hopefully because of age rather than disease. When a *Cymbidium* is repotted, it's desirable to remove these leafless bulbs, preferably by severing the rhizome linking them to the rest of the plant. It's best to use a sterile knife or scissors, but some growers simply twist the connecting rhizome by hand until it breaks. Having removed the back-bulbs, how do you 'strike' them and why? 'Striking' is jargon for encouraging the back-bulb to produce new growth from incipient leaf nodes, which are mostly located near the base of the bulb.

To prepare a back-bulb for 'striking' first remove any old leaf husks, as these may harbour scale and other insect pests. Then cut any residual roots back to their junction with the back-bulb and trim the break if the bulb was removed by twisting. To minimise infection by any of the organisms responsible for rot the cut surfaces should be sealed, either with Steri-Prune® (or similar sealing paste) or by leaving the bulb lying in the shade for a few days for the cut surfaces to form a scab or callus. Alternatively the cut surfaces can be dusted with a fungicide or sulphur. Leaving the back-bulbs to dry for a few days is the simplest option.

There are many different ways of striking back-bulbs. I've used several different methods, each with a fair measure of success. The simplest method, involving least effort, is simply to bury the back-bulb to two thirds of its depth in the same potting medium that you use for the rest of your collection. If you use a 100mm standard (deep) pot then no attention will be needed for two years except regular watering and the addition of a little slow release fertiliser in spring.

Some back-bulbs strike more rapidly than others. If a leaf growth appears within three months you're doing well, while six months would be average. If there's no sign of growth within twelve months all but the super-optimist should give up (there are always a few back-bulbs each year that fail to strike). Generally, roots do not appear until the leaf growth is several inches tall, and there is no point in applying slow-release fertiliser until this stage is reached. If you're keen, there may be some benefit in applying liquid fertiliser to the foliage at an earlier stage as liquid fertilisers are absorbed by leaves as well as by roots.

In recent years I've struck back-bulbs of my more highly valued cymbidiums using *Sphagnum* moss as the potting medium. This method seems to produce more rapid growth, but that's probably because I place the pots in my heated glasshouse during winter. After about a year the moss is removed and replaced with conventional cymbidium mix. A modified version of this method has been used by some growers for many years.

The back-bulbs are placed in a plastic bag with a little very wet *Sphagnum* moss and the bag is then sealed and hung in the shadehouse. The struck back-bulbs are potted in cymbidium mix when the leaves and roots are a few inches long.

The old back-bulb eventually rots and it should be removed from the new plant as soon as rot is detected. While the bulb is in good condition it provides the plant with nutrients, so it's best to leave it attached as long as possible. However, some growers remove the old back-bulb as soon as the new plant appears able to support itself and then attempt to make it strike a second time. This often works, particularly with large back-bulbs, although the chances of the bulb rotting during its second year are much greater, of course.

So, novice grower, now you know how to increase your *Cymbidium* collection. But be warned - it takes four years on average for the new plant to reach flowering size and if you strike all your back-bulbs you will soon have to move to larger premises!

Brian Milligan
Balwyn North, Victoria

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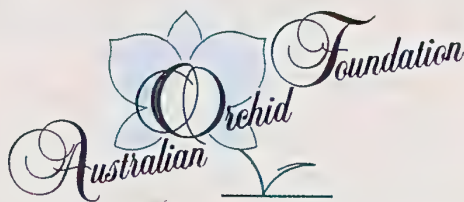
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2nd Prize	\$250.00
3rd Prize	\$150.00

The Foundation invites all Australian orchid growers to consider the topic for 2018 and submit an entry. We would like to hear about your ideas and experiences and benefit from them.

ESSAY TOPIC FOR 2018:

“My Greatest Orchid Disaster”

We have all had disasters, but the greatest??? Be honest, own up, tell the tale and maybe we can all learn.

The deadline for receipt of all entries is June 30th 2018

Send your entry

electronically to: aof@australianorchidfoundation.org.au

or to: AOF Essay Prize P.O. Box 440, Yarra Glen Vic. 3775

Please include your name, address and telephone contact.

Entry Rules:

- This competition is open to Australian residents only
- The essay will be an original article, not previously published
- The essay must be no more than 4,000 words, short essays are most welcome
- The essay is to be in English and typewritten
- Entries may include art work or images
- The authors of the essays will remain undisclosed to the judges, whose decision will be final. If in the opinion of the judges, no worthy essays are received, there will be no award that year
- Non-winning entries will be returned to the sender if requested. These entries may be submitted to the editors of Australian orchid periodicals for publication, with permission from the author
- The winning essay will be announced at the AGM of the Foundation in October 2018
- The winning entries will be placed on the AOF website and maybe published in Australian orchid periodicals

Crucifix Orchids as Feature Plants

by David P. Banks



Crucifix Orchids are just so easy to grow in frost-free climates. Often orchid growers never put the effort in to grow them to their full potential, spending time with more valuable plants instead! Recently I saw a couple of pots grown by a keen gardener in western Sydney, that were about the best flowering examples I have seen of this orange *Epidendrum*.

These orchids receive full sun from sunrise til mid afternoon, where they get relief from the house. But due to the close proximity of the houses brickwork, the plants have their own microclimate where they would warm up quickly on winter days.

*David P. Banks
Hills District Orchids
Seven Hills / Northmead, NSW
Email: david@hillsdistrictorchids.com*



Predatory Frogs

by Alan W. Stephenson

Despite the title, there is nothing to fear as it is just a light hearted and sarcastic means of making a point.

It refers to statements made by a former Federal MP and previous Shoalhaven Mayor (NSW), a few vehemently anti-environment local radio people and their hangers-on. The original statement made by the former MP was featured in an article in my local paper "Gash lashes orchids and frogs". This was intended to mean frogs and orchids were responsible for stopping several developments in the Nowra area of New South Wales and is completely untrue as any reasonable person would realise.

The first issue was the expansion of the Princes Highway through the south of Nowra where Green and Golden Bell Frogs were said to inhabit a low-lying section. The usual environmental assessment (EA) was done but none were located and this was for the same reason endangered orchids are rarely seen. The reason is that the person conducting the EA failed to recognise, frogs are a boom and bust species, i.e. if a water body is present the likelihood of frogs being located is high but frogs move away to water if water is not present on that site. A very good friend of mine, who happens to be a frog and reptile specialist knows where the frogs are and I have seen and photographed them in the region of a local residential development. Any problem resulting from the development of certain areas of water and frogs in regard to the 2000 Olympic Games at Homebush was overcome by the creation of habitat.

The road was constructed without incident but when frogs were later discovered the expected uproar ensued and a concrete pond was constructed on either side of the road, filled with water and the anti-environment yahoos expressed their feelings.

The main point is that the road followed its planned path and nothing was destroyed, however the mesh fence surrounding the ponds now supports a large number of home-made frogs of all types, some knitted and some in the form of normal stuffed toys and are a joy to see when driving past. They are also a source of annoyance to some, which makes me smile as I regularly drive past them. A comment was made that the frogs are in gaol as the Nowra Prison is 500 metres away on the western side of the highway.

During the episode of the Yerrilyong Motor Racing development, one of the extremist radio commentators gave his usual rant by saying "we can't have a frog or an orchid stop another development", when neither is correct.

This same person has also indicated he does not believe in environmental assessments prior to any development as this simply restricts development. Frogs did not stop the highway and what caused the disruption to the motorcycle development was yet another inept EA, when the so-called professionals failed to locate their target species, *Cryptostylis hunteriana* and to make matters worse also failed to locate and record four common orchid species.

I recently had yet another brain explosion as I purchased several foil covered chocolate frogs and placed them around a plant of *Cryptostylis hunteriana*, with one on a higher level very close to the flower on a plant, pretending it was about to be dinner. My hope was for the photos I constructed to find their way on to the website of the radio station to annoy certain persons.

This is far and away different from anything I have written about orchids. But for some reason the Shoalhaven has produced a great number of public and vocal anti-environment people and many of these unfortunately have an unrestricted public profile. The point of this article was to say don't worry about the orchids as the frogs will take care of them. ■

Alan W. Stephenson

Nowra, NSW

Email: affine@tpg.com.au

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AOR 010

Perth, Western Australia to host the 24th World Orchid Conference in 2023 (WOC24)

Just in case you have not heard, the Western Australian Regional Orchid Organisation was successful in its bid to stage the 24th World Orchid Conference in Perth, Western Australia in September 2023. The Perth Convention Bureau made the following press release:

"Perth is set to welcome the 24th World Orchid Conference in 2023 (WOC24). This is a triennial event held in different destinations around the world and in 2023 over 2,000 delegates and exhibitors will attend the week-long event."

Western Australia is renowned for its wildflowers and, in particular, its unique, native orchids. WOC24 will be a significant event focusing on the importance of Agribusiness through the Horticultural industry. With an economic impact estimated at 9.1 million dollars, WOC24 will deliver multiple dividends to the State of Western Australia.

World Orchid Conferences have been held every three years since 1954. The conferences provide an opportunity to bring the global orchid community together. The orchid show includes spectacular displays from countries around the world and will be enjoyed by both international and national attendees and host city residents. A component of WOC24 will be a scientific lecture program, together with a social program including tours to the South West which is recognised as a global biodiversity hot spot. Western Australia is an orchid lover's paradise having the richest concentration for terrestrial orchid species - 99% of Western Australia's native orchids are found nowhere else on earth.

The Perth Convention Bureau's (PCB) Chief Executive Officer, Paul Beeson, commented: "PCB has worked with the Chairman of the WA Regional Orchid Organisation (WAROO) Bid Team, Bruce Larson, since 2009 to secure this international event - which is exceptional in both scale and content. The international bidding and lobbying process began with bids to host the 22nd World Orchid Conference 2017 and the 23rd World Orchid Conference 2020, which were both lost to other destinations. The World Orchid Conference was one of my first bids as a PCB Business Development Manager over ten years ago, so it's a delight, as CEO, to bear witness to Bruce and Western Australia's final success".

PCB's Chairman, Kevin Skipworth CVO, added: "this final win is a testament to the persistence, resilience and high international reputation of Bruce Larson and WAROO within

the commercial, research and passionate hobbyists of the orchid world. Their high qualities are why PCB continued to invest in their repeated bidding. They are exceptional Western Australians."

Bruce Larson commented "We're delighted to bring this prestigious event to Perth, which is the culmination of many years of effort by dedicated enthusiasts to secure the conference." The Western Australia Regional Orchid Organisation (WAROO) is the peak orchid body representing all orchid clubs and societies in this State. Bruce Larson has Chaired all the WOC bid teams and has Chaired WAROO's major events Organising Committees over the past 12 years.

The conference bidding team consisted of Bruce Larson, Dr Kingsley Dixon, Ken Jones and Tony Watkinson, all of who attended the recent WOC22 staged in Guayaquil, Ecuador where Perth was awarded the 2023 World Orchid Conference & Show (WOC24).

WAROO is aligned with and is a member of the Australian Orchid Council (AOC) and in turn the World Orchid Trust."

The granting of the right to present the 24th WOC is provisional and we expect it to be confirmed at the 23rd WOC in Taiwan, where the Western Australian Regional Orchid Organisation will present a display and final pitch to the delegates to promote the 24th WOC in Perth.

The 24th WOC is planned to be held in conjunction with the 8th International Orchid Conservation Congress which will be returning to Perth after the inaugural conference in 2001.

The venue will be the Perth Convention and Exhibition Centre from the 3rd to the 11th September 2023. September is peak flowering season for Western Australia's unique terrestrial orchids and native wildflowers. We will, of course, be organising tours for attendees to view them in their natural surroundings.

A web site will be up and running very soon.

We are immensely proud to have been selected for this honour and intend to live up to our reputation by presenting the best WOC we possibly can.

Tony Watkinson
Western Australia
Email: waos@iinet.net.au



GROWING ORCHIDS FROM SEED

by Philip Seaton and
Margaret Ramsay

Written for the amateur and the professional without access to sophisticated laboratory equipment and chemicals, 'Growing Orchids from Seed' contains all you need to know to be an expert!

Careful guidelines on seed selection and making equipment, pollinating orchid flowers, harvesting seed, successful germination, transplanting seedlings, and growing them on to healthy plants.

Eighty-eight lavishly illustrated pages of coloured drawings and photographs explain everything from selecting the right kit, through to planting your own seed-raised plants in the greenhouse, teaching you step-by-step how to grow orchids confidently, successfully and professionally.

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(Landscape Format).



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ORCHID SPECIES OF THE SHOALHAVEN: NSW Australia by Alan W. Stephenson

Alan Stephenson lives in Nowra and is well placed to give the first botanical treatment of the native orchids of the Shoalhaven region. He has extended the distribution ranges of a number of uncommon and rare species, as well as discovering new taxa. This 68 page book is packed with both information and superb photography, almost exclusively taken by the author. All of the recorded orchid species native to the region are included and illustrated.

The introductory chapters discuss the area covered by this book, the structure of the orchid plants, their natural habitats, parts of an orchid flower, orchid structure and the pollination of orchids. This is followed by the main section of the book that alphabetically lists and

discusses each species, with information such as Common Names, Recent Synonyms, Flowering Time in the wild, plus a brief description of the plant, flowers and preferred habitat. There are many terrestrial species fully covered as well as a number of epiphytic and lithophytic genera that are found in the area.

The quality of the printing and colour reproductions are sparking. This is a wonderful field guide that will aid even the most novice naturalist or native orchid enthusiast and confidently assist them in identifying examples they encounter in the field. It represents excellent value, as it also covers many species found naturally along the East Coast of New South Wales.

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ORCHIDS OF WESTERN AUSTRALIA

by Andrew Brown, Pat Dundas,
Kingsley Dixon & Stephen Hopper

Written by three of Western Australia's most prominent orchidologists and featuring over 200 full-page, colour illustrations by renowned botanical artist Pat Dundas, *Orchids of Western Australia* is the first modern text cataloguing all 409 known species.

This comprehensive resource for hardened enthusiasts and initiates alike features a wealth of information in a single volume – from a detailed introduction to WA orchids to information on each species, including who named them, where they were first collected, their habitat, distribution, flowering period, size and distinguishing features. This book is the culmination of decades of work by WA's foremost experts, each dedicated to the conservation of one of the world's most important regional orchid floras.



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ORCHIDS IN YOUR GARDEN How to grow orchids in the backyard by Robert Friend

It sounds too good to be true, but orchids are as easy to grow in the backyard as a lawn or a bed of roses. With their fantastic reputation, they can be grown in greenhouses.

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This book shows you how to introduce orchids into the garden, by attaching them to trees, fixing them on rocks and walls, or planting them in garden beds. With more than 150,000 species and hybrids of orchids in the world, there are plants suitable for every garden.

Robert Friend draws on a lifetime's experience with orchids to explain how to choose the right orchid for your climate and how to landscape orchids in different types of gardens. Ranging from tropical to cool climate areas, from large acreages to small courtyard gardens, almost every backyard can enjoy the best of one of nature's wonders.

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Colour and B&W.**

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THE ALLURE OF ORCHIDS by Mark A. Clements

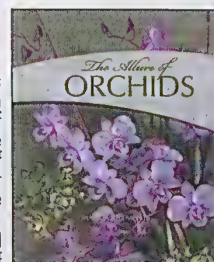
From 1788 when First Fleet artist George Raper painted *Diuris punctata*, the botanical world has been fascinated by Australian orchids. Hundreds of orchid images from the National Library of Australia's collection, with words by Mark Clements from the Australian National Herbarium in Canberra, make *The Allure of Orchids* a must-read for lovers of flowers, original paintings and our indigenous orchids. Many of these unique botanical illustrations are being showcased to a wider audience for the very first time.

The Allure of Orchids features an essay by internationally recognised orchid expert Mark Clements, accompanied by a portfolio of illustrations, both historical and modern, of this alluring species. In it you will find works by around 25 artists, including the extraordinarily detailed lithographs of early botanical illustrator Ferdinand Bower, Ellis Rowan's beautiful paintings, the delicate watercolours of Margaret Cochrane Scott, and many more. *The Allure of Orchids* is divided into two parts; Terrestrial or ground orchids and Epiphytic or tree dwelling species. Clements says, "These illustrations can be enjoyed simply as works of art and part of our rich and colourful Australian illustrative heritage. But, significantly, they are also part of the scientific record of this country, particularly during the early exploration of the continent."

Interestingly, a lot of the old and traditional Latin botanical names have been used in this work. The author makes a significant number of anecdotal notes and comments throughout the book, to keep the reader fully informed. It is a "must have" book for those interested in Australian orchids and historical botanical art.

**159 pages, colour.
284mm x 233mm.
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GROWING ORCHIDS IN COOL CLIMATE AUSTRALIA

(Second Edition, 2013)

Editors: Fraser, M.J., Wright, J., & Ferris, W. 2013

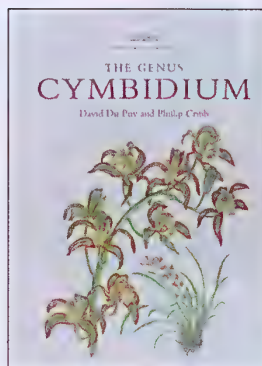
This is an updated book and includes much new information. Members of the Orchid Society of Australia. This book covers topics on growing orchids, Structures for growing orchids, growing media, pests and diseases, Orchid nomenclature, Orchid Classification and of course how to grow many types of orchids in cool climate regions of Australia. The main section covers individual cultivation of the most popular types of

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orchids that we all fall in love with at the beginning... *Cymbidium*, *Cattleya*, *Oncidium*, *Paphiopedilum*, *Masdevallia*, *Stanhopea*... and much more. An invaluable reference for novice growers and those with a passion for this delightful plant family.

128 pages with about 190 photos. Paperback.

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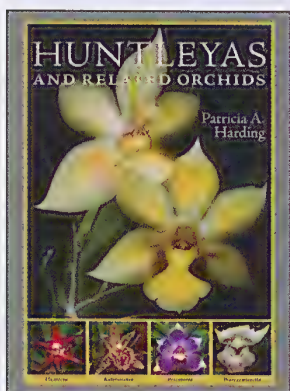
THE GENUS CYMBIDIUM

by David Du Puy and Phillip Cribb

Second edition (2007). Full taxonomic accounts of all 52 species of *Cymbidium*, including distribution, maps, colour photographs, line drawings and colour paintings. Taxonomic key. Detailed conservation assessment of *Cymbidium*. Cultivation chapter and breeding chapters as well as chapters covering history, morphology, seed morphology, anatomy, cytology, pollination, uses and phylogeny.

369 pages, colour photographs, line drawings, maps. Small quarto, dustwrapper.

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HUNTLEYAS AND RELATED ORCHIDS

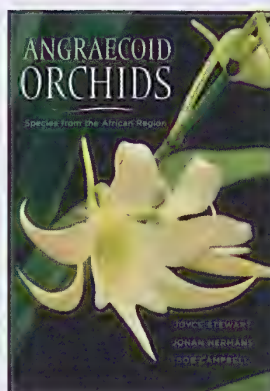
by Patricia A. Harding

Revered by avid orchid collectors for its delightful, star-shaped flowers, *Huntleya* is a small group of orchids found low in the forest. *Huntleya* is a small orchid genus that includes fourteen species. They occur in wet cloud forests at medium altitudes of Guatemala, Costa Rica, South America down to Bolivia. The type species *Huntleya meleagris* also occurs in Trinidad. Besides their striking colours — from deep blue to waxy red, royal purple to almost black — flowers of this group are known for their distinctive shapes, patterns, and textures. As appealing as these lovely tropical orchids are, their identification has been

confused since the first species was described in the mid-1800s. Recent DNA studies have led to a clearer understanding of relationships and, as a result of this clarity, it is now possible to sort out the taxonomic problems and identify the characteristics that set species apart. In this first book devoted to the *Huntleya* alliance, author Patricia Harding presents evidence from the scientific literature, other growers, and her own experience that will enable orchid enthusiasts everywhere to identify their plants and grow them successfully. Patricia A. Harding is an accredited American Orchid Society judge who has been growing and photographing orchids for three decades.

260 pages, 150 colour photos. Hardcover.

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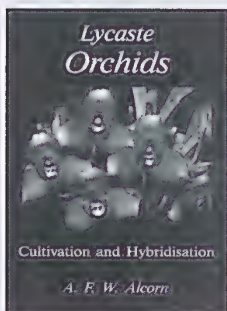
ANGRAECOID ORCHIDS: Species from the African Region

by Joyce Stewart, Johan Hermans, and Bob Campbell

These so-called 'Jewels of Africa' with their sparkling flowers, distinctive growth habit and floriferous nature are much prized and this account, the first to include the Angraecoid orchids of both Africa and Madagascar, is long awaited. It brings together, in a single volume, descriptions of all 690 species in this intriguing group of orchids and will be the essential reference for all Angraecoid orchid enthusiasts for years to come. Including such horticulturally important genera as *Angraecum*, *Aeranthus*, *Aerangis* and *Jumellea*. Stewart, Herman and Campbell have all spent time in various parts of eastern and southern Africa and precise ecological information relating to habitat, altitude preferences and flowering season of individual plants will be particularly helpful to growers. The diagnostic features of each genus are illustrated and over half the species are accompanied by exquisite photographs taken in both wild habitats and in cultivation.

432 pages, 290 colour photos. 185mm x 265mm. Hardcover.

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LYCASTE ORCHIDS - Cultivation and Hybridisation

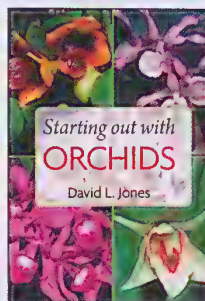
by A.F.W. Alcorn

Lycaste orchids are easy to grow, and they produce flowers that range from the beautiful to the bizarre. No book previously has provided detailed cultural requirements of the Lycaste, and this book should fill that gap, and encourage new growers to take up the cultivation of this beautiful genus. A section on hybridising contains valuable information on inheritance and genetics that will benefit any hybridiser, not just the grower of Lycastes, as well as helpful hints on how to avoid pitfalls in your hybridising program. Michael Hallett, a friend of

Fred Alcorn for a number of years, co-wrote this book with Fred and has completed it posthumously. He has a background in genetics, research and botany, and a passion for plants, especially orchids.

237 pages. Colour and B&W.

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STARTING OUT WITH ORCHIDS

by David L. Jones

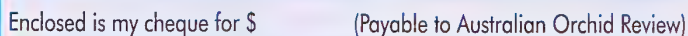
David Jones is arguably one of Australia's most prolific, precise and respected botanical and horticultural authors. The book is divided in two parts. Part One begins with the cultivation chapters, covering Easy Orchids for Beginners, General Cultivation Requirements, Growing Epiphytic Orchids, Growing Terrestrial Orchids, Orchid Pests and Diseases, Housing Your Orchids and Propagating Your Orchids. The information contained within these pages alone is required reading for all beginners through to experienced orchid growers. The text is very easy to read and understand with numerous sound cultivation tips and treatments discussed. There are many excellent and clear line illustrations that help describe terms or highlight diagnostic features. There are over 250 colour photographs.

Part Two discusses the orchids themselves with concise information on each species. They are grouped primarily according to climatic requirements, starting with cool growing orchids progressing to the warm growers, in alphabetical sequence first with terrestrial genera, followed by the epiphytes. Both Australian and exotic species are treated together. For each entry there is specific detailed information on each species, as well as a simple table giving the basic cultivation needs and flowering season. A glossary is also included to explain unfamiliar terms.

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Two New Combinations in Australian Orchidaceae

by David L. Jones

1. The mycoheterotrophic genus *Demorchis* was established in 2004 (Jones & Clements 2004) and differentiated from *Gastrodia* by the presence of filamentous roots which arise from the apex of the rhizome (no roots in *Gastrodia*), by its short inflated sac-like flowers (long tubular flowers in *Gastrodia*), by its very thick fleshy sepals and by the peduncle and pedicel thickening and increasing in length after fertilisation (absent in *Gastrodia*). (Mycoheterotrophy is a symbiotic relationship between certain kinds of plants and fungi, in which the plant gets all or part of its food from parasitism upon fungi rather than from photosynthesis). Recent research has also indicated that these orchids may have a touch sensitive labellum (Martos et al. 2015) indicating a much higher degree of specialisation than in *Gastrodia*. Examination of the photos accompanying the erection of a new species of *Gastrodia* (Gray 2018) clearly shows it to be better placed in *Demorchis*. The new combination is made here:-

Demorchis umbrosa (B.Gray) D.L.Jones & M.A.Clem., **comb. nov.** Basionym: *Gastrodia umbrosa* B.Gray, *Austrobaileya* 10(1): 86–92 (2017).

2. A yellow-flowered hybrid *Diuris* from the New England Tableland of NSW has been wrongly linked with *Diuris punctata* since its description as a variety of that species in 1944. This relatively common taxon is of hybrid origin between *D. chrysanth* D.L.Jones and one of several species of purple-flowered *Diuris* that occur on the New England Tableland. The hybrid bears little resemblance to *D. punctata* and a new combination is needed to emphasise its very limited connection with that species. A new epithet is necessary since the name *sulphurea* is occupied at specific rank (*Diuris sulphurea* R.Br.).

Diuris × *sulphurella* D.L.Jones, **nom. et stat. nov.** Basionym: *Diuris punctata* var. *sulphurea* Rupp, *Proc. Linn. Soc. New South Wales* 69: 73 (1944).

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David L. Jones

Email: dabajones@bigpond.com

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AOR 001

2018 ORCHID EVENTS – *What's on!*

April 7-8 Collector's Plant Fair
– Hawkesbury Racecourse, NSW

May 12-13 Mothers Day Show
– Port Macquarie, NSW

May 24-26 Casino & District Orchid Society
– Anglican Church Hall, Casino, NSW

June 23-24 Mingara Orchid Fair & Show
– Mingara, NSW

July 14-15 Tinonee Orchids Show
and Workshop
– Tinonee, NSW

July 20-22 North Shore Orchid Society
– Gordon Shopping Centre, NSW

July 29 Hills District Orchids
– Winter Open Day
– Northmead, NSW

August 17-19 St. Ives Orchid Fair
– St. Ives Showground, NSW

August 24-26 Melbourne Orchid Spectacular
– Boxhall Pavillion (KCC Park), Skye, VIC

September 30 Hills District Orchids
– Spring Open Day
– Northmead, NSW

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TINONEE ORCHIDS

Come & see us at your local show in 2018

2018 DIARY

We will be at the following shows and Orchid events.

- April 7–8Collector's Plant Fair – Hawkesbury NSW
May 12–13Mothers Day Show – Port Macquarie NSW
May 18–20Orchids Out West – Hawkesbury NSW
June 23–24Mingara Orchid Fair & Show
**July 14–15TINONEE ORCHIDS WORKSHOP,
OPEN DAY & SHOW**
July 20–22Australian Orchid Conference – Windsor
July 29Hills District Orchids – Winter Open Day
August 3–5National Orchid Extravaganza – Dural
August 17–19St. Ives Orchid Fair
September 8Bellingen Plant Fair – Bellingen
September 22–23 ..Plant Lovers Fair – Kariong
September 30Hills District Orchids – Spring Open Day
October 12–14Southern Orchid Spectacular – Cronulla
November 3–4Tweed District Orchid Fair – Tweed Heads
December 2Hills District Orchids – Summer Open Day

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Nursery Hours: 9am-4pm Thursday & Friday. Other days by appointment please



Sarcochilus setosus

is a unique and distinctive new species from North Queensland that is formally described in this issue. Flower freshly opening; note the bristle-like long white hairs on the labellum, looking like a filament lamp.

Photo: D.P. Banks